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Prepared by the
American Wool, Cotton,
and Financial Reporter,

FRANK P. BENNETT, EDITOR.

PUBLISHED BY THE

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Norfolk & Western Railroad.

THE AMERICAN
WOOL, COTTON, AND FINANCIAL
REPORTER,

19 Pearl Street, Boston.
335 Broadway, New York.
241 Chestnut Street, Philadelphia.

SF 375
H. S.

SHEEP HUSBANDRY IN VIRGINIA.

CHAPTER I.

No better explanation can be made of the purpose of this little pamphlet than to print the following letter which the editor of the *Wool Reporter* received recently from the Vice-President of that very enterprising corporation, the Norfolk & Western Railroad:—

ROANOKE, VA., April 20, 1891.

Editor American Wool Reporter:

As you probably know, I am greatly interested in increasing the sheep flocks along our line. Our railroad runs from Hagerstown, Md., to Bristol, Tenn., and to Norton, Va., through a purely limestone country, the best water and the best sheep-raising country in America, with a more equable climate than any other portion of the United States. In support of this statement, see page 46 of the Norfolk & Western Reference Book, giving the average temperature at Wytheville, Va., for a period of fifteen years, a copy of which book I send you by this mail, under separate cover. My attention has been attracted to the article on page 498 of your issue of April 2, under the heading of "The Leading Breeds of Sheep,—Cotswolds." Have you ever published like articles, with cuts, on the merinos, Shropshires, Leicesters, Oxfords, Lincolns, Hampshires, and Southdowns? If so, could you not take the cuts and the articles, and prepare us a pamphlet, of which I could distribute 20,000 or 30,000 copies among the farmers along our line, with some general information as to the care of sheep, manner of handling, housing, and pasturing so as not to use up the pasture? I am very desirous of bringing together the sheep-raisers of our section and the breeders of high-grade rams and ewes in New England, and especially of the Cotswolds and Merinos. I believe that if we can do this, and give our farmers information early this summer, they will double their flocks, and we can make Virginia one of the greatest wool-producing States of the Union. Of course, in giving this information in the pamphlet, I want the best and most reliable information to be had, with cuts, similar to the one in your issue of April 2, of all breeds of sheep. Please let me hear from you early.

I have sent a marked copy of your paper, calling their attention to the prizes you offer to wool-growers, to one of our papers. If you will send me ten or more of these papers, I will endeavor to get this article copied into the newspapers along our line. You will notice that in the map in our Reference Book the mountain ranges are shown. All of the territory lying between the Blue Ridge, on the east, and the extreme western range of the Alleghanies, on the west, is a limestone country, extending clear through, almost to Chattanooga, Tenn.

Yours truly,

CHAS. G. EDDY, Vice-President.

As Mr. Eddy expressed a desire that the work should be begun immediately, the present little pamphlet is somewhat less complete than would otherwise be the case; but any questions which residents along the line of the Norfolk & Western Railroad may care to ask at any time

respecting the breeding and care of sheep will receive attention by addressing the AMERICAN WOOL REPORTER at either of its offices, 19 Pearl Street, Boston, 335 Broadway, New York, or 241 Chestnut Street, Philadelphia.

The first requirement of a human being in its advent into this world is something to eat; the second, something to wear. It is of the leading representative of the animal kingdom which is foremost in producing this material, which more largely clothes mankind than any other, the sheep, that we wish to speak. The history of this very useful animal antedates that of all other domestic animals, and is coeval with that of man, simply because there is no domesticated animal combining so nearly in itself mankind's necessities, food and raiment.

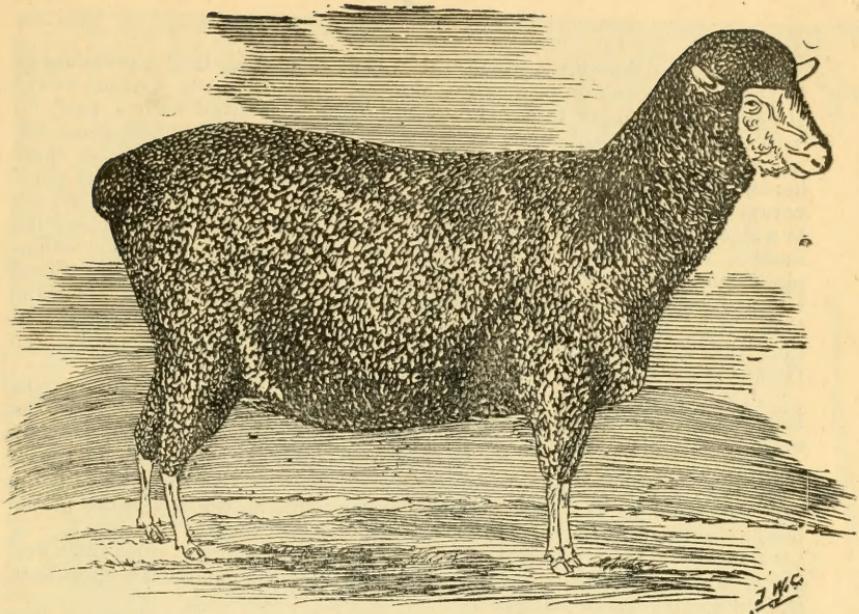
CHAPTER II.

THE AMERICAN MERINO.

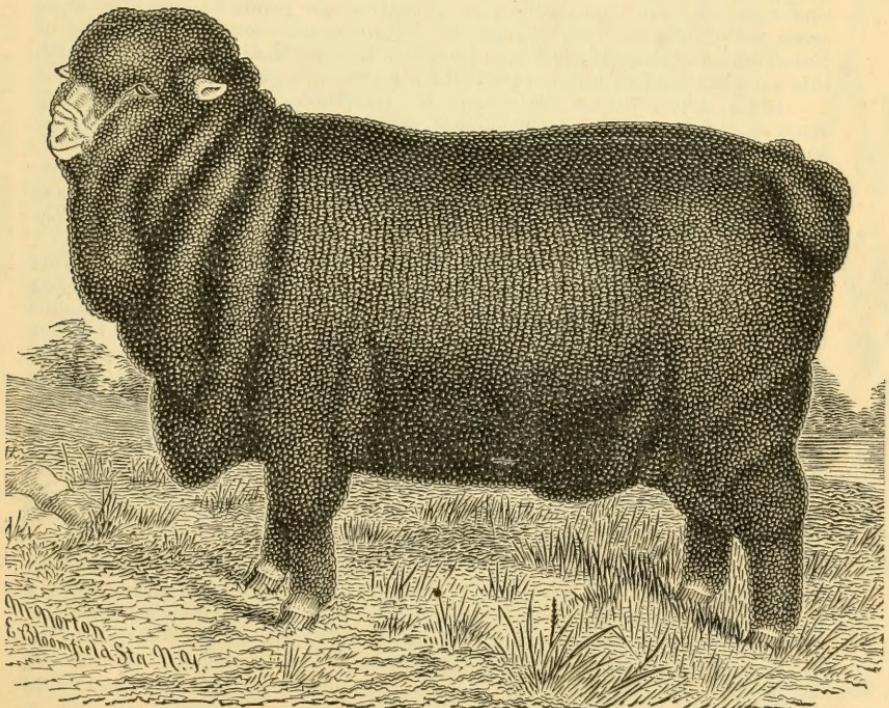
As the merino is the leading type of sheep in America to-day, and as the fine wool which it produces constitutes the bulk of the material consumed by the manufacturers of woollen cloths in the United States, we will first consider the salient features of this popular breed found roaming, not only over the wide pastoral areas of Texas, but on the ranches of the vast states and territories of the great Far West, and in much smaller numbers in its primitive American home, the less limited areas of the Middle wool-producing States and the sheep-folds of Vermont and Maine. Let us speak more particularly of the Spanish merino.

The Spanish merino, originally imported into this country, was quite different from the American merino of to-day. Unquestionably, there is no variety of this sheep in the world which surpasses it. First imported into this country, from the sunny slopes of Spain, more than ninety years ago, it has, under the watchful eye and constant care of the American husbandman, been moulded, like unto a plastic clay in the hands of the potter, until it would seem as though the *beau idéal* of this popular breed had now been reached. That the rapid strides which have been accomplished in the direction of improvement may be more obvious, let us briefly review the merino's early history in America and its original condition.

In examining the archives which record the first importation of merino sheep into the United States, the first authentic date we have is 1798. It was in that year that Hon. Wm. Porter, of Boston, presented to Mr. Andrew Craigie, of Cambridge, Mass., two ewes and a ram brought over on the ship "Bald Eagle." Then in 1801 a French banker, Delessert by name, imported four ram tegs from France, three of which died on the voyage. It was in this year that Mr. Adams, of Zanesville, Ohio, imported from France a pair of merinos. Next came the importation by Chancellor Livingston, American Minister to France, in 1802, who sent four purchased from the government flock at Chalons. Soon after he sent over a ram from the famous flock at Rambouillet. At Clermont, the home of Chancellor Livingston, in 1809 was held a shearing, and there was, on this occasion, a ram 14 months old, named "Clermont," which clipped a fleece of 9 pounds and 6 ounces; live weight, 126 pounds. This is the first public shearing, of which we have a record, that was held in the United States. The weight of the rams imported at about this time ranged from 100 to 130 pounds, and their fleeces from 5 to 10 pounds of unwashed wool. The ewes averaged from 50 to 55 pounds each, and yielded unwashed fleeces averaging from 4 to 6 pounds. The grade or common ewes, often termed natives, averaged, about this time, from 3 to $4\frac{1}{2}$ pounds; $\frac{1}{2}$ -bloods the result of one cross with the merino, about 5 pounds; and $\frac{3}{4}$ -blood, second cross, from $5\frac{1}{2}$ to $7\frac{1}{2}$ pounds,—thus showing the steady gain in weight as the blood of the merino became infused into the flocks. It is recorded that the price for $\frac{1}{2}$ -blood wool was 75 cents, for $\frac{3}{4}$ -blood \$1.25, and for $\frac{7}{8}$ \$1.50, and for pure merino \$2 per pound.



Infantado Ewe of the beginning of the present century, described in the accompanying pages.



Modern Merino Ewe, showing what has been accomplished by selection and breeding, as described in the accompanying pages.

The Massachusetts Agricultural Society offered in 1802 a premium of \$50 for the importation of a pair of sheep of superior breed. Colonel David Humphreys, Minister to the Court of Spain, contracted with a party to deliver to him, at Lisbon, 25 rams and 75 ewes, from one to two years old, which were driven across the country of Portugal by three Spanish shepherds, escorted by a small guard of Portuguese soldiers. After fifty days' voyage they were landed at Derby, Conn., being transferred at New York to a small sloop. The severity of the voyage had by this time reduced the number to 21 rams and 70 ewes. For this importation Colonel Humphreys received a gold medal from the Massachusetts Society. Both Colonel Humphreys and Chancellor Livingston were large purchasers from the Duke of Infantado's flock. The Duke of Infantado had 40,000 sheep, and there is evidence that over 2,000 of them were purchased and brought to the United States in 1810 and 1811.

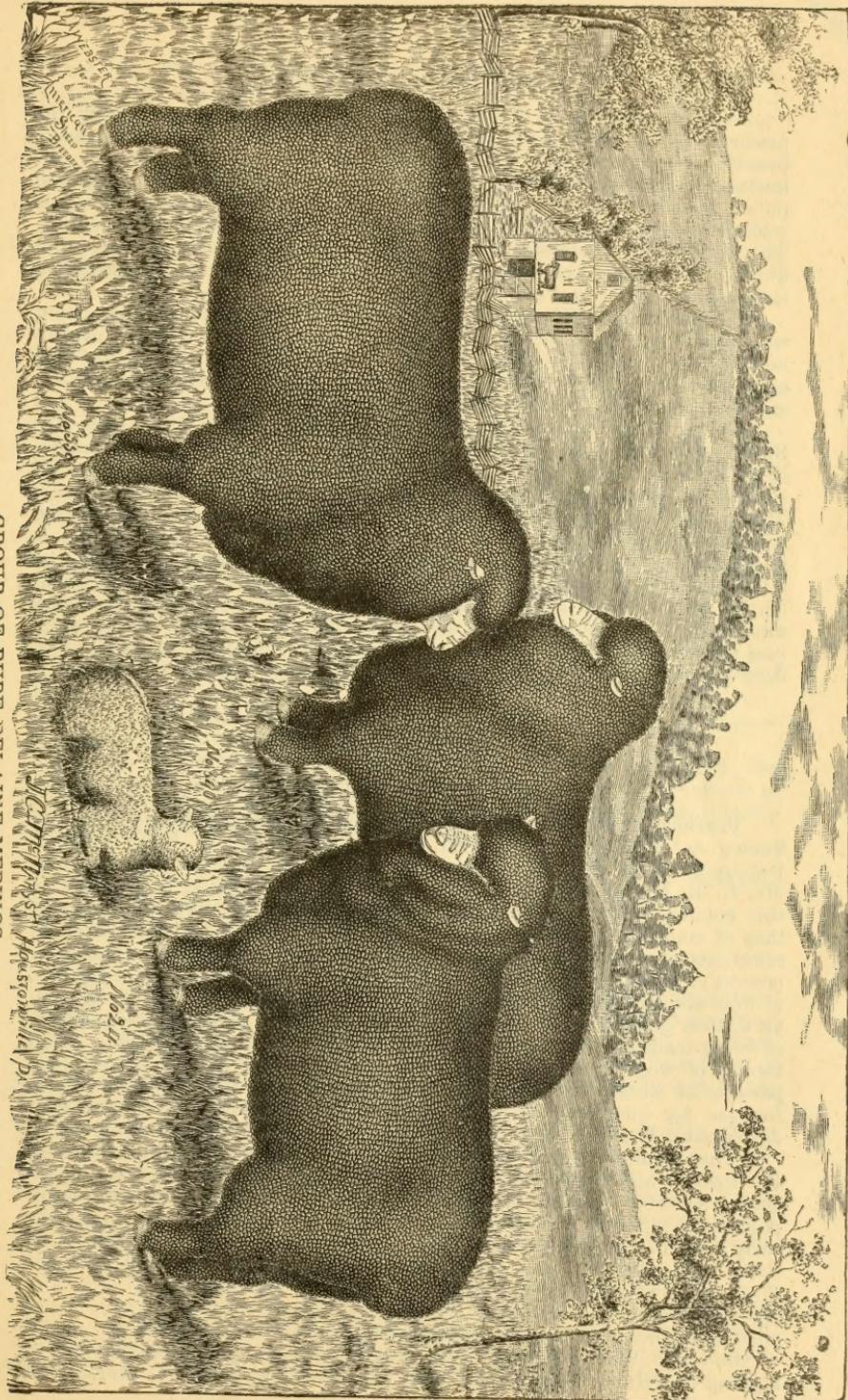
Upon page 3 of this pamphlet is presented a picture of one of the Infantado merino ewes of the beginning of the present century. Upon the same page is presented a modern merino ewe, showing what has been accomplished by selection and breeding. The average merino to-day shears more than twice as great a percentage of fleece to live weight as did the very best specimens of which we have any account at the beginning of the present century.

Our merino sheep have also increased materially in size since their first importation from Spain. Our rams weigh at least one-fourth more than the old Spanish rams did seventy-five years ago.

Moreover, the great improvements which have been made in the weight of fleeces, the beauty of form, and the size and strength of the merino sheep, have not been at the sacrifice of quality of wool. In a work published in the early part of the present century a leading writer says: "All the wools of Spain that I have examined—not excepting the prime Leonese, the most esteemed of any—appear to me to contain much more jar than that of Rambouillet. Everything seems to evince that we shall soon totally banish this hard, intractable hair, so hurtful to the manufacturer, from our fleeces."

In an early work on this subject, the number of fibres that were many years since found grown on an inch of surface of merino sheep was given as 40,000 to 48,000. A year or two ago some Vermont breeders of an investigating spirit killed a healthy, thrifty animal with a fine compact fleece, and, before the pelt had time to dry and shrink in the least, an inch square was carefully cut from the shoulder. A microscopic examination showed 222,300 fibres.

It seems to have fallen upon the farmers among the green hills of Vermont to develop the merino from these early dates onward. The herbage of her hills, the health-giving air and water, the near proximity of mountains, and, above all, her clay soil, seemed admirably adapted for the highest development of this grade of sheep. The western portion of the State, particularly among the clay hillsides of Addison and Rutland Counties, was where they were clustered the thickest, and where good care, feed, and management brought them rapidly out of their comparatively low standard. As originally imported from Spain, these sheep were rather ungainly in shape. The legs and faces were bare of wool, horns scraggy, fleeces open; i.e., lacking in density and shearing light fleeces. In 1850 the average weight of fleece of the sheep of Vermont was 3 pounds, 5½ ounces; of the United States, 2 pounds, 6¾ ounces. The largest increase of the average weight of fleeces in Vermont appears to be between 1850 and 1870, and is regarded as a strong argument in favor of the cultivation of the heavy shearing, greasy merinos, which are the animals which have raised the American shearing standard to its present position. In 1860 the fleeces of the sheep of Vermont had increased to 4 pounds, 2½ ounces, as is chronicled in the records of the Vermont Merino Sheep Breeders' Association, and the average fleece of the United States to 2 pounds, 10½ ounces.



GROUP OF PURE DELAINE MERINOS.

DISPERSION OF THE MERINO.

With the opening of the Rebellion came an active request for all the products of the farm and factory, and a consequent stimulation of sheep-breeding throughout the country at once occurred. Many were the car-loads of thoroughbred merinos, from the best of Vermont flocks, that were pulled westward into the States of Ohio, Michigan, Wisconsin, and other wool-growing sections, and dispersed for the improvement of grade flocks. The desirability of crossing on this class of sheep was at once seen; and during 1877 there were shipped from one station alone in Vermont $29\frac{1}{2}$ carloads, averaging over 100 head in each.

On March 23, 1876, the Vermont Merino Sheep Breeders' Association was formed, the object being to preserve the purity of the Spanish merino race of sheep, and to encourage further improvement. The success of this association led to the formation of those of a like character in other States, and the good work they have done is everywhere evident.

During the years following 1877 more sheep found their way into States farther west; and the ranges of Montana, Wyoming, Texas, Colorado, New Mexico, and other range sections absorbed not only Vermont's small surplus, but that of Ohio, Michigan, Wisconsin, and less important States. The merino is a noble sheep. Outnumbering many times all other breeds, it certainly deserves the primary consideration we have accorded it. It is interesting to note that in 1850 the heaviest shearing stock rams cut a fleece of only about 18 pounds; while at the present day rams shearing 30, 35, 40, and even 45 pounds, are not infrequent, and there are many ewes that will shear 16, 18, 20, and occasionally 25 pounds. Great evenness and density of fleece have also been attained. Quite a number of rams' fleeces have yielded over 9 pounds of scoured wool each, and ewes' over 7.

CHAPTER III.

THE DELAINE MERINO.

Previous to 1868 the merino sheep had yielded exclusively what are known as clothing wools, which are carded instead of being combed. But in the year just named the enterprise of an eminent manufacturer, Mr. E. R. Mudge, of Boston, Mass., now deceased, resulted in planting in this country a branch of textile industry until then unknown; namely, that of combing, spinning, and weaving into fine worsted goods the longer selections of fine merino wools under the name of delaine. This new process of combing instead of carding is one in which the fibres, or strands, of wool are laid parallel with each other and spun out the full length in yarn, thus getting all the strength of the fibre. It is thereby susceptible of being made the finest as well as the strongest and most durable of all fabrics of wool production. The goods known as "diagonals," or some patterns of worsted cloth, have become more popular than any other fabric for use for men's wear. The popularity of this class of fabrics soon developed a breed of sheep especially calculated to produce delaine wools.

The Delaine Merino has become a new family, formed by a cross of the Spanish and Black Top Merino families. It is larger than the Spanish or Vermont merino, is smooth-bodied, well formed, compactly built, possesses a vigorous constitution, and has a mutton carcass such as in the early days of sheep-breeding would not have been accepted in fine wool sheep. The fleece is dense, fine, and clean white, and of a length of about three inches at one year's growth. A weight of 150 pounds for rams and 100 pounds for ewes is claimed at maturity. These sheep are largely domiciled in Wa-hington County, Pennsylvania, and in the neighboring counties of Ohio and West Virginia. We present, on page 5, an excellent cut of a group of Delaine Merino ewes, bred and owned by Mr. J. C. McNary, of

"Fine View Farm," Houstonville, Pa. Sheepmen in Washington County, Pennsylvania, who had been breeders of Vermont merinos for half a century, have turned their attention within the past twenty years to the more vigorous and larger sheep known as Delaine Merinos with great success. By a comparison of the sheep on page 5 with the modern merino ewe shown on page 3, the reader will note the absence of wrinkles and the smoother character of the fleece of the delaine merino.

Concerning these sheep we have just received the following letter. The samples of wool sent with the letter were beautiful fine delaine staple, measuring over five inches in length:—

McCONNELL'S MILLS, WASHINGTON COUNTY, PA.,
May 6, 1891.

Editor of the American Wool Reporter:

Yours of the 2d inst. received. Will send you electrotype by express. Also enclose you a few samples of wool at one year's growth from ewes and rams of different ages. Will state that I have three hundred head of thoroughbred delaines that will average 10 pounds merchantable wool. You can see from the cut the make-up of the sheep. Have had a good Western trade, and sell from 40 to 60 rams each season. Have on hand now 65 choice rams, yearlings, and two-year-olds for the trade this fall. Stock recorded in Vols. 1 and 4 National Delaine Merino Register. The delaines can be easier handled than most other fine-wooled breeds, being free from wrinkles and with only a sufficient amount of grease to keep the fleece in a bright and healthful condition. Rams weigh at maturity from 150 to 180 pounds, and a chance one will weigh as high as 200 pounds. Ewes will weigh at maturity from 110 to 140 pounds. Rams shear from 14 to 20 and 22 pounds. Ewes shear from 8 to 14 pounds, the quality of wool you find enclosed.

I write you these few points to show what we consider the *all-purpose* sheep, with plenty of wool on a good mutton carcass.

In this part of the State, as well as all through the Ohio Valley, the smooth-bodied delaines have been taking the lead over the *wrinklers*, as breeders can keep more of them together to a better advantage than the *oily ones*, *Spanish breeds*, or of the coarser mutton breeds.

Respectfully,

L. A. RUSSELL.

CHAPTER IV.

THE SOUTHDOWN: ITS ORIGIN AND ADAPTATION TO VIRGINIA.

The improved sheep of modern times may be divided into three classes; namely, the fine-wool sheep, the middle-wool sheep, and the coarse-wool sheep. The merino, or fine-wool type of sheep, has already been described. The limits of the present pamphlet are too brief to admit of a description of all the varieties of middle-wool sheep. We will consequently devote the largest share of attention in this class to the Southdowns.

There is a growing demand in America for mutton and mutton sheep. The feeling of depression that existed in wool-growing circles until within the past six months, particularly among breeders whose sole aim in flock management was to keep sheep simply for the wool they produced, has, without question, led to a more general appreciation of the mutton breeds and a recognition that a small flock of such sheep can be kept with profit, however discouraging the wool prospect may appear.

This consideration of affairs has been brought home with far more force to the sheep raisers in the Eastern and Middle States than in Western ranges. It has received far more recognition from breeders owning high-priced lands on which higher forms of agriculture must be pursued than the production of wool alone, in order to insure a profit. The great value

of sheep to the land is, of course, unquestioned; but these mutton breeds pay for themselves at the butchers, leaving the wool and the benefit to the land for net profit. Certainly, the coupling of mutton production with wool-growing should never be overlooked in discussing the question of fair remuneration in sheep husbandry.

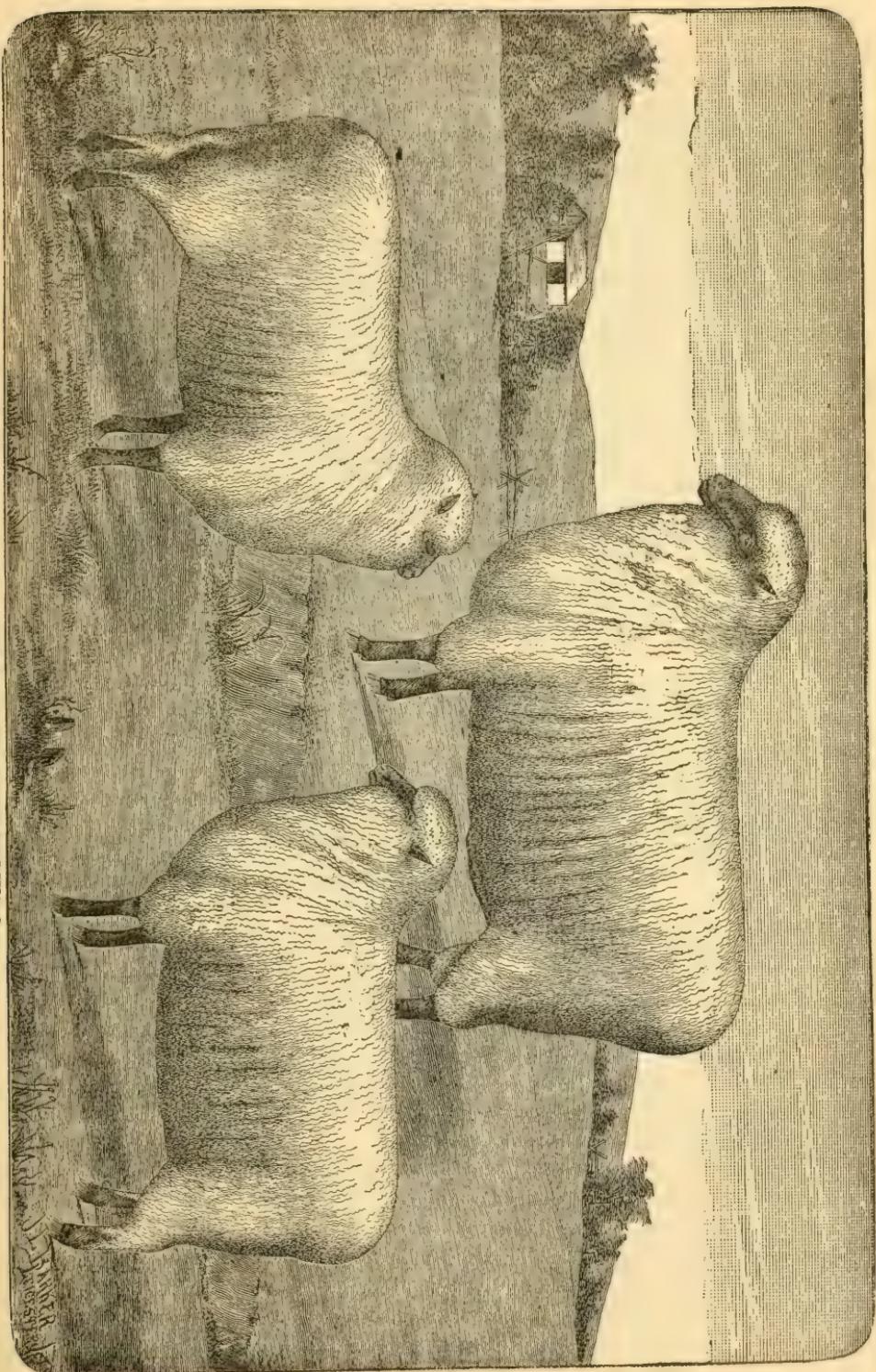
The number and importance of the British breeds of sheep cannot fail to attract the attention of all who give any thought to the matter. If we will but think for a moment, we shall indeed be surprised to find that an island of so small an area should contain so many distinct breeds of any domestic animal. The English sheep farmer has taken much pride in his pursuit, and given it his best intelligence. In his nearness to markets, he has been always fortunate. His high-priced lands have allowed of his keeping nothing but a general-purpose sheep, and it has naturally enough been left to him to develop the mutton breeds to a condition nearer perfection than has ever been attained by breeders in any other country; while, on the other hand, it is the flockmaster of the United States into whose hands has been thrown the destiny of the range sheep, the merino. In his pursuit, the English sheep farmer has been very successful; and the cities and towns of the kingdom, containing many of the greatest workshops in the world, have consumed his very palatable mutton.

Among the foremost breeds of mutton sheep stand the Southdowns, tersely and accurately described on the Leicester monument, at Holkham, England, as "small in size, but great in value." It is upon the chalk lands of England's southern counties, the ridge of lands lying south of London, called the Southdowns, that we find the primitive home of the Southdown sheep,—the downs of Sussex; and it is upon these pastoral areas they have fed and been known since the days of William the Conqueror.

The original Southdown was small in size, long and thin in the neck, high on the shoulders, high on the loins, low behind down on the rumps. The ribs were flat, the fore-quarters were narrow, but the legs were good, still the bone was quite large. The fleece was also light, and it was not considered that the sheep had arrived at maturity for fattening until it was three years old. It appears that the improvement began at about the period of the war between Great Britain and America, the recognized superiority of the wool greatly stimulating the improvement. A Southdown fleece was then considered as fine wool, bringing a high price and generally utilized for carding purposes. Since the popular merino became better known, and as fine wool from this breed continued to grow in favor, the Southdown has been classed with the middle-wool type of sheep.

There have been exhibited at the Fat Stock Show, in London, specimens of wethers from this breed that have weighed from 250 to 260 pounds each; but of course sheep of such large size do not produce so fine a textured flesh. They are inclined to be coarse and thin, mutton is not so tender and savory as that of the smaller-sized animals, weighing, say 100 to 175 pounds alive, when well fattened. Beyond these latter weights the breeders of the United States are advised not to venture; for, if the size be increased too much, they are not apt to thrive well, for they are fitted to rough pastures and short herbage. Successful breeders always aim to secure uniformity of character in their flocks, and it is then that the ewes shall look as near alike as two peas.

It is said that Southdown mutton commands a higher price than any other English sort. The breed is certainly one of the oldest and purest of the mutton classes, and is unquestionably unexcelled. There is strong rivalry between this and other breeds, but it has lost none of its popularity. Its docility and beauty have always made it a particular favorite with the rich, while its excellent feeding qualities have won for it much endearment among all who are acquainted with it. Besides the superior quality of its flesh, there is an added merit in its composition, being largely composed of lean meat, the fat being well distributed throughout, not unlike that of a well-fed shorthorn.



GROUP OF PURE BRED SOUTHDOWNS.

The illustration which accompanies this article represents a group of Southdowns bred and owned by R. W. & L. M. Crothers, Taylorstown Station, Washington County, Pa. They are registered in the American Southdown Record, and are as handsome specimens of the breed as one often sees. The animal which stands on the higher ground in the picture is a ram of no mean merit. The handsome contour of his body certainly suggests his value as a sire, and that his progeny will rank high for the excellence of their mutton and wool.

A well-known authority in sheep has thought it quite probable that the original Southdown breed was horned, for the reason that during his day it was not unusual to find among the buck lambs specimens with small horns. The dark hue of head and legs of these sheep, he believed, not only proved the original color, which he holds was black, but the much later period when it was attempted to get rid of this dingy color. There are also others who believe that, if the breed were to relapse into a wild state, it would become black.

Last season our American breeders of English sheep secured some valuable types of the Southdown breed. In August of this year, which is the date at which the public sales occur in England, it is expected that other large purchases will be made for this country. While mutton prices have not been high this season, there has been enough discrimination in favor of the best to vindicate the policy of catering to the requests of those who are willing to pay for a good thing. Considered from a point of healthfulness, mutton is without a peer. Besides, it is cheaper than either beef or pork. Let us cultivate the English breeds of sheep, cultivate a taste for mutton, and we shall grow healthier, wealthier, and wiser.

CHAPTER V.

SOME MISCELLANEOUS MIDDLE-WOOL TYPES OF SHEEP.

LESLIE, N.Y., April 18, 1891.

Editor of the American Wool Reporter:

I have about 150 high-bred merino ewes. With what breed should I cross them to produce a good quality of combing or delaine wool? Will you have the kindness to answer through the REPORTER, and benefit many wool-growers? I, for one, have got tired of growing wool at 25 cents per pound, if I can do better.

Very respectfully,

GEO. N. BROWN.

[Our reply to Mr. Brown will be found in the editorial below entitled "To Reclaim New England Farms."—ED.]

TO RECLAIM NEW ENGLAND FARMS.

[From the AMERICAN WOOL REPORTER, April 30, 1891.]

We are very glad to answer the questions propounded by Mr. Brown, of Leslie, N.Y., since THE REPORTER has never favored the excessive partiality for thoroughbred merinos which prevails among many American flockmasters. If Mr. Brown's merinos are of large size, we would recommend him to cross them with large Hampshire or Shropshire bucks, and the result will be a crossbred sheep which will yield a very excellent and useful combing wool. If his sheep are small merinos, the cross with the large Hampshire or Shropshire bucks would be too severe, and the ewes would have hardly milk enough for the lambs. In this case, he should make the first cross with the smaller Southdown rams; and he may then cross the first generation with the Hampshire or Shropshire bucks to secure the desired wools, combined with an excellent carcass for mutton purposes. We prefer the Hampshires, Shropshires, and Southdowns to the Oxfords, as

the fleeces of the last-named are looser and less adapted to withstand the inclemency of the weather.

The Southdown is a hardy little animal, with a tight fleece, which enables it to live out of doors the year round, and with a constitution which enables it to keep fat on next to nothing. The Hampshire Down possesses many of the same characteristics, with a heavier carcass. Mr. Brown can make money by turning his attention to this class of sheep.

Just now a good deal is being said in the newspapers and in the legislatures about the abandoned farms of New England. The man who can't take one of these deserted farms, with a little capital and a moderate degree of business sense, and make it pay 10 per cent. net by the judicious application of sheep husbandry would be an exception. Mr. E. F. Bowditch, the celebrated stock farmer of Framingham, Mass., once gave us an instance of his purchase of a worn out pasture of 44 acres, which had previously supported 7 cows with difficulty. He kept 350 sheep on this pasture for 5 years; and it now supports 21 cows where the 7 lean kine previously dragged out a precarious and unsatisfactory existence.

To produce a delaine wool, we would recommend that this party of merino ewes be crossed with a Black Top, or delaine, merino ram, such as is bred in the counties of Washington, Greene, and Alleghany in Pennsylvania and in Eastern Ohio. Such wools as these sheep produce sell for 36 @ 37 cents, washed, in Boston to-day. Besides, the delaines have been bred large, and make excellent mutton.

DORSET HORNED SHEEP.

53 & 55 JOHN ST., NEW YORK, May 21, 1890.

Editor of the American Wool Reporter:

I have been informed that the "Dorset Horned" breed of sheep are very prolific, and pay well when raised for mutton. Can you give me any information concerning them?

Yours truly,

S. M. COLGATE.

[The Dorset Horns are a breed but recently introduced into this country, and as yet are only being experimented with. Thus far they are very well liked. The ewes are excellent mothers, and are very productive, raising two lambs each, and occasionally three. In England they are bred almost exclusively for the raising of lambs for the Christmas market. Lambs at 60 days old often weigh from 50 to 60 pounds. At six months they will weigh from 100 to 125 pounds. Mr. M. M. Small, of Cooperstown, Pa., reports a ewe imported from England, now about six years old, who in less than sixteen months produced nine living sheep and one dead lamb. Another valuable feature of this breed is that they will not run when pursued by dogs, but get together and assume the offensive; and the dogs stand a poor show. The leading breeder of Dorsets in New England has been E. F. Bowditch, Framingham, Mass.; but he has lately turned his attention to other breeds.—ED.]

SHEEP-RAISING IN WEST VIRGINIA.

NEW YORK, May 8, 1890.

Editor of the American Wool Reporter:

I am contemplating the raising of sheep in West Virginia. Will you please send me the names of wool-raisers in West Virginia who raise merino sheep? Any pamphlets which you may know of on the raising of sheep in West Virginia, and what kind it is best to keep at present, whether a wool or mutton sheep, I shall be glad to receive. Awaiting your reply, I remain,

Yours truly, S. M.

[The most popular breed of merino or fine-wool sheep in Western Pennsylvania, West Virginia, and Ohio to-day, is the delaine type.

Recent attempts at sheep-breeding in the eastern wool-growing sections of the United States have demonstrated that we must breed a sheep suited for mutton as well as wool, and the delaine type seems to be a golden mean between the two extremes of the strictly mutton breed and the wrinkly, greasy merino, suited only for wool.

Some of the leading breeders of this type in West Virginia are: Geo. E. Sisson, Roney's Point; Eakin Bros., Wadestown; Charles A. Allen, Limestone; and William F. Archer, Majorsville. Further information could be obtained by addressing these gentlemen or James McClelland, secretary Delaine Association, Canonsburg, Pa., or W. G. Berry, secretary Black Top Association, Houstonville, Pa., who have also for sale the stock registers of the associations.—ED.]

*FROM THE PRESIDENT OF THE NATIONAL WOOL
GROWERS' ASSOCIATION.*

The writer of the following letter, Hon. A. M. Garland, was formerly president of the National Association of Wool Growers, and is now Secretary of the Home Market Club of Illinois and of the Illinois branch of the American Protective Tariff League:—

CHICAGO, May 16, 1891.

Editor of the American Wool Reporter:

As a reader of the AMERICAN WOOL REPORTER, I have been especially interested by the effort of the Norfolk & Western R.R. to secure attention to the advantages offered by the country along its line for profitable sheep husbandry. It has been my privilege to travel over much of the country referred to, and I could not fail to note its adaptability for flock culture. The Virginias, old and new, are blessed with a climate that happily compromises between the extremes of rigorous winters to the north and those equally formidable drawbacks so frequently encountered by aspiring stock-raisers in the Gulf States; and, when to this is added near proximity to markets for both mutton and wool, there seems nothing lacking for successful sheep husbandry except the same nerve to invest and determination to push business that have secured ascendancy under less favoring conditions. It is now a good many years since I first called attention to the Appalachian country as a land of great promise for flock culture, and subsequent observation and inquiry have confirmed the correctness of those earlier impressions. May present efforts in this behalf be more successful!

Very truly yours,

A. M. GARLAND.

CHAPTER VI.

T H E C O T S W O L D .

While the various British breeds of sheep, the Shropshires, the Leicesters, the Oxfords, the Lincolns, the Hampshires, and others, all have their friends and fervent admirers, there are none of these famous mutton breeds that are so justly entitled to "claims of long descent" and none which have borne a more important part in the improvement of favorite English breeds, than the Cotswold.

By referring to the famous writers of the fifteenth and sixteenth centuries, such as Markham, Drayton, Camden, Stowe, and others, there is a repleteness of evidence of the early celebrity of this ancient sheep. In fact, allusions in those days were so distinct that there is no mistaking their meaning,—that exceptional preference was early accorded the Cotswold. Historians and poets alike bestowed high praise, pronouncing the Cotswold

wool as "most fine and soft," as "held in passing great account among nations," of "abundant fleece" and "wealthy locks." As a proof of its antiquity, there are records that in 1437 Cotswold wool was imported to Spain, and in 1468 Cotswold rams were shipped to that sunny southern land as presents from English to Spanish monarchs. Let us go still further back in the early ages.

We know that the history of the meek and lowly sheep antedates that of all other domestic animals, and is really coeval with that of man. Abel, the illustrious son of Adam and Eve, was engaged in the sheep business; and, as the history of the Cotswold extends further back upon the pages of history than other breeds, we cannot but believe his flock must have been of Cotswolds or merinos, and that Cain, utterly discouraged in following the vocation of tilling the soil, became envious of his brother as he whistled along over the heaths with his sheep, and wool going up every day, and sought to slay him. Be that as it may, we find that in the twelfth century the Cotswold was introduced into England from Spain by Eleanor, Queen of Henry II. of England; and it is a well-authenticated fact that there existed in Spain, as early as A.D. 41, a breed of coarse, long-wool sheep.

The home of the Cotswold sheep is found in that area of low, calcareous hills in the eastern portion of the county of Gloucester, England, a tract formerly bleak wastes, used for sheep pastures. Here they were subject to bleak winds on the rich herbage always produced by limestone soil, it being the practice of the shepherds to graze them here, and fatten them in the protected valleys of Gloucestershire. Gloucester County is in southwestern England, and is drained by the Severn River, as it nears the Bristol Channel. The country has three natural divisions, the hill, the vale, and the forest, nearly parallel. This hilly country consists entirely of the Cotswolds, which extend the entire length, at about an average elevation of 600 feet, sometimes rising to 1,200 feet above the level of the sea, and embracing an area of nearly 300,000 acres of rolling tableland. The valleys are extremely fertile, and these extend from the base of the Cotswolds to the east bank of the Severn.

The leading characteristics of the modern Cotswold are its remarkable combination of massive proportions of frame and its constitution, capable of enduring much hardship and exposure and appearing perfectly cosmopolitan on all sorts of soils. In the northern latitudes of the United States the Cotswold turned out in the yards among the cattle and allowed to shift for itself thrives where the merino, under similar conditions, would perish. Thus the Cotswold, from the bleak exposed Cotswold hills of Britain, displays in its constitution the results of environment. They are well adapted to grazing on short pastures, and are really the largest sheep in the world, standing high, with long, broad backs, overhanging rumps, and full-set fleeces. Generally they have white faces and legs; but occasionally we find them mottled, and sometimes gray in color. The Cotswold frame is large, lengthy, and wide, the ribs are well sprung, level back and good legs of mutton. The neck is quite long and arched, the eyes are prominent, the crown of the head well woolled, the rams often carrying locks which hang down over their eyes.

The principal objection to the Cotswold's mutton is the disproportion of fat and lean, there being too much of the former. There should of course be a proper intermingling, in order to have an attractively marbled flesh. Improved methods of feeding, however, will greatly improve this defect; for, where a judicious method of fattening has been pursued, an amelioration of the trouble is noticeable.

The fleece of the Cotswold is renowned for great length of staple but not for excessive weight, and yet hogget fleeces exceed 14 pounds. Sometimes, however, a good average clip of a ewe is about 9 pounds. This wool grades from medium to coarse, the bulk being coarse combing, quoted on the Boston market to-day at 25 cents per pound, 3 cents higher than Ohio

fine unwashed and 3 cents lower than $\frac{3}{4}$. This coarse combing wool has been somewhat draggy in our wool markets for some months, and even at 25 cents has been slow to move. The bulk of this $\frac{1}{4}$ -blood comes from Kentucky, Indiana, Missouri, Illinois, and Maine; and most of it has been bought at so high a figure that, with the market at its present status, it cannot be sold at a good profit. Shearlings shear, not infrequently, 15 and 16 pounds; and phenomenal fleeces of older rams have weighed $21\frac{1}{2}$ pounds. Cotswold flocks, ewes, and rams, average generally from 10 to 11 pounds.

The weight of Cotswolds at one year old generally ranges from 140 to 150 pounds, and lambs dropped in February and coupled will generally drop a lamb the next year in May. But, of course, such early breeding is hardly to be recommended, as it seriously interferes with proper development. The fleeces of this breed are inclined to be quite open, while some have coarser fibres than others. The open fleece is considered an objection by some, as it is held that during storms they become more thoroughly wet than closer-fleeced breeds.

If one will take the trouble to experiment with the Cotswold, they will find them an excellent breed for crossing on common or grade sheep. Possessed of stout, straight legs and other excellent points, the first cross produces valuable results, hardly to be obtained so early from using other breeds. Standing well up on their feet, they are less liable to foot-rot than almost any other sheep, and, being active, are well adapted to procure a living where some of the other English breeds would not subsist. The ewes are particularly prolific, many of them producing twins. The lambs are always active, hardy; and the ewes are good mothers.

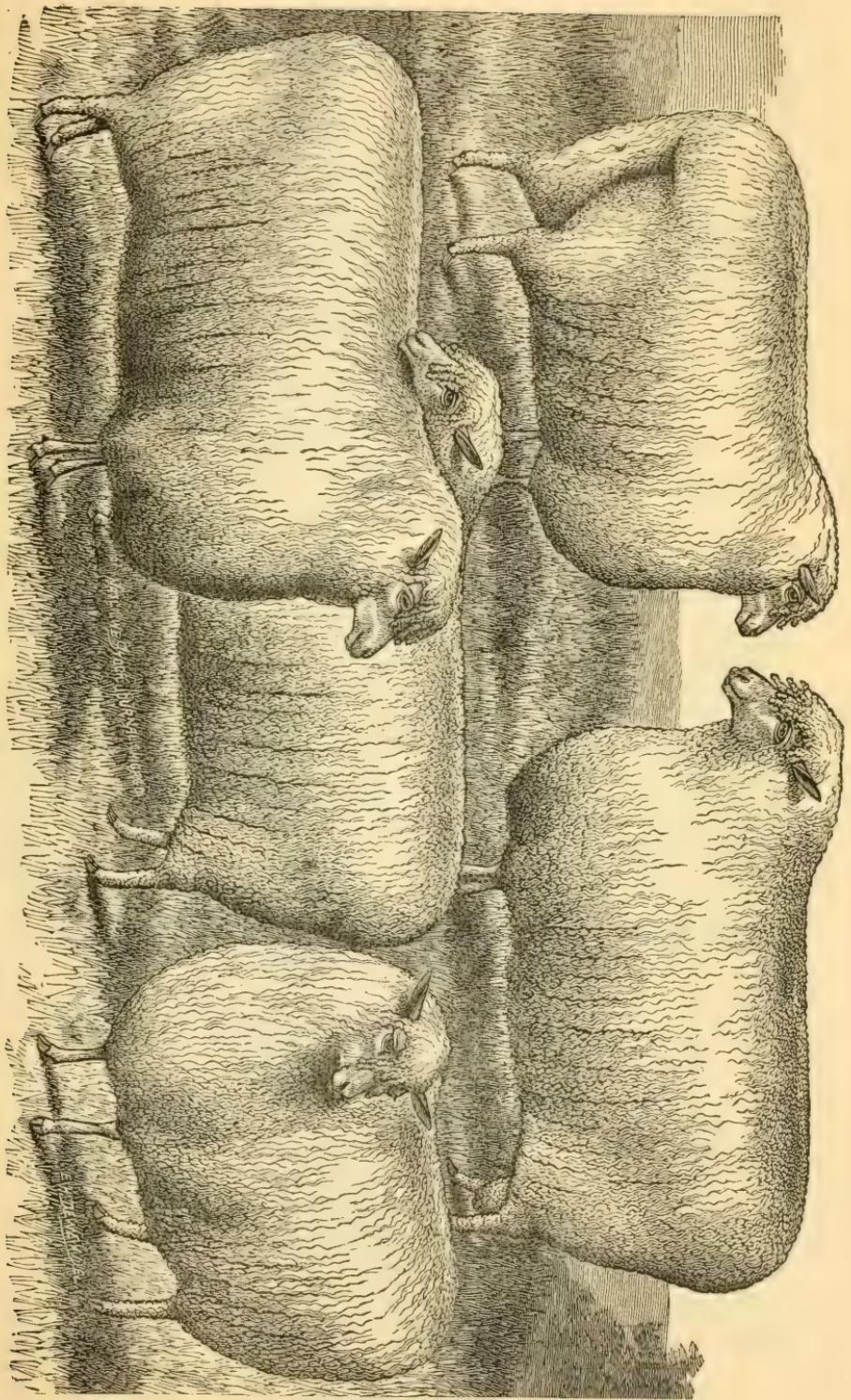
An objectionable point in a Cotswold is a bare head. The head should be well woolled on the cheeks up to the eyes and partially around them. The nose should be straight, or nearly so, and the head minus horns. The well-bred Cotswold should stand straight on all four of his legs. The countenance should be intelligent and well proportioned. The brisket should be prominent, and the hind quarters square, broad, and full. The ribs should be well sprung, the flanks deep, and the legs clean with heavy bone, free from wool and of medium length. The ear should have the feeling of velvet, and should be thick. The eye should be large, transparent, with the white of the eye of a purplish color.

In managing the Cotswold, the exercise of care and attention pays, just as in the breeding of any other sheep. Although able to withstand many hardships, if they can be protected from them so much the better, thus absolving the shepherd from cruelty to his flock and increasing his profits from it very materially. The influence of cold is a waste to the body, and consequently more food is necessary, warmth being often a substitute for food. Besides this the fleeces will be sounder, healthier, and better grown in every way. In summer they should be protected from scorching suns, and in spring and autumn from cold rains. Such care bestowed on them or any other sheep will be time profitably employed.

As the taste for well-fattened mutton continues to grow among the great American meat-eating public, so the popularity of the Cotswold will continue to widen; for with its many superior qualities as a mutton sheep it is bound to be esteemed wherever bred. Straightness of back, breadth of loins, and roundness of frame are points of excellence which cannot fail to be recognized, and cause it to hold the position it has retained so long,—that of one of the best of the English mutton breeds, and one that has borne a prominent part in the improvement of more than one of our popular English breeds.

OTHER LONG-WOOLLED BREEDS.

With the brief space at our disposal in the present pamphlet, we need merely allude to the other long-wooled breeds of sheep after our very full description of the Cotswold. In England the Leicester blood is very prev-



A GROUP OF REPRESENTATIVE COTSWOLDS.

alent among all the long-woollen sheep. The Lincoln was formerly characterized by a gaunt carcass and coarse and entangled wool. The Romney Marsh, of which little is known in this country, had a rough form, long legs, and irregular and coarse wool. All of these characteristics, however, have been modified by breeding; and all the improved varieties of long-woollen sheep have become so similar in their characteristics that the Virginia farmer will find that the Cotswold answers his purpose as well as any other. In England a good deal of attention is being devoted to the New Leicester, a variety of long-woollen sheep in which breeders have obtained great perfection of carcass with some sacrifice of wool. The reason for this is that the English farmers who have reared this class of sheep have preferred to lose two or three pounds of wool for the sake of gaining ten or twelve pounds of mutton. With them the first object is the value of the carcass, and the fleece is always a secondary consideration.

CHAPTER VII.

THE HAMPSHIRE DOWN: SOME FACTS ABOUT THIS WELL-KNOWN BREED
FROM A PRACTICAL SHEEPMAN.

FRAMINGHAM, MASS., May 10, 1891.

Editor of the American Wool Reporter:

Dear Sir,—In reply to your request, I send you photographs of thirteen Hampshire rams and six ewes just imported. Eleven of the rams are yearlings and two are two-year-olds, weighing $238\frac{1}{2}$ and 332 pounds respectively and shearing 12 and $9\frac{1}{2}$ pounds of wool, which is first-class combing wool, worth in present market about thirty-two cents.

The ewes are all yearlings, weighing 191 pounds and shearing $14\frac{1}{2}$ pounds. While the Southdown breed of sheep has probably done more toward improving other breeds than all the others, experience seems to prove that the larger breeds of Downs, such as Oxford, Shropshire, and Hampshire, must necessarily help the sheep-breeding industry still more for the following reasons:—

All of these larger Down breeds have the same early maturity tendency, more or less, of the Southdown, with a much larger carcass and a much heavier fleece.

The Hampshire is better than the Oxford, because its fleece is much closer and withstands our storms much better. The one thing a sheep cannot stand is getting its skin wet, which always happens in loose-woollen sheep.

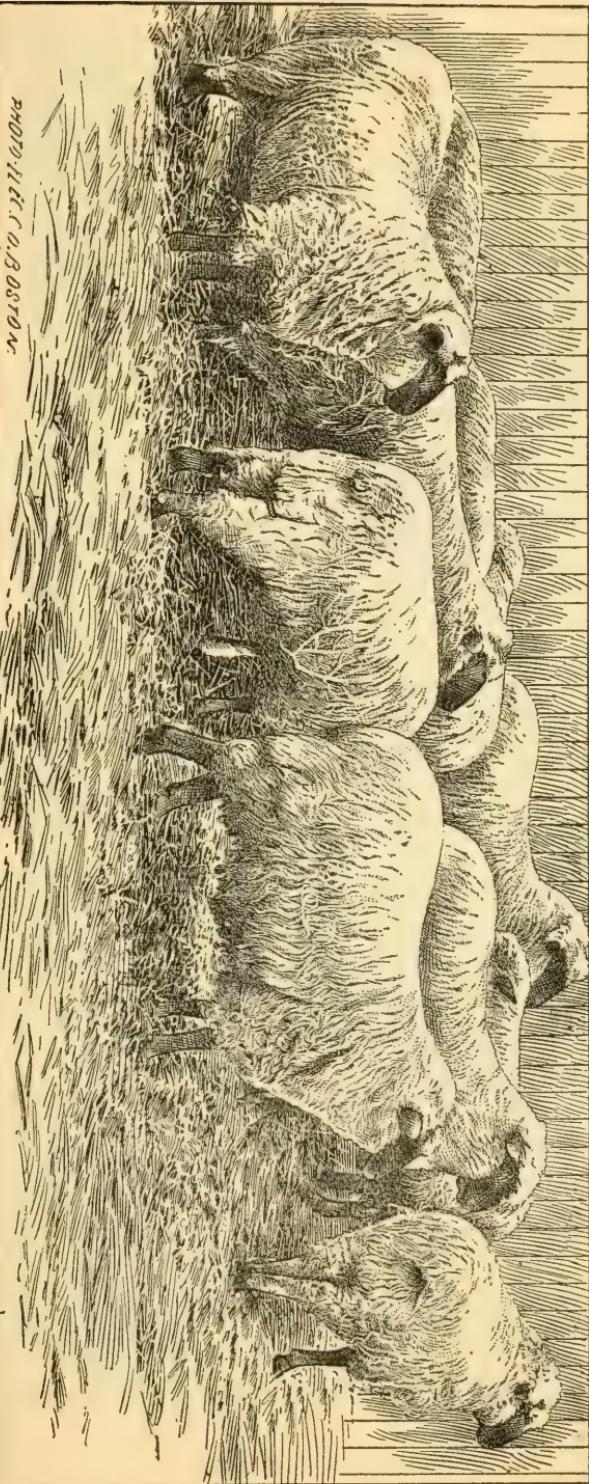
The Hampshire makes a stronger cross on our grade ewes than either of the other breeds, perhaps owing to its breeding, which is the result of intelligent breeding by the working (not fancy) farmers of Hampshire, Berkshire, and Wilkshire, by the farther infusion of selected Southdown blood with very black faces on the best of their native sheep, which had for many years more or less Southdown blood bred into them.

I take the following description of the Hampshire from the preface to the *Hampshire Down Flock Record*, established 1890, written by its president, James Wood, Esq., of Mt. Kisco, N.Y.:—

"His head is rather large, with a Roman face; neck long and usually well set on; shoulders sloping; brisket deep, with abundant room for the vital organs; back straight, with a spring of rib going around the barrel; loin broad; quarters long and broad; hams round and heavy; legs bony and strong; and feet large and open, with a tough sole and crust."

"The face and legs are the blackest of any of the Down breeds. Gray faces are avoided. The wool is of medium length and strong fibre. It is

224072-H.H.C. A. BOSTON.



A FLOCK OF HAMPSHIRE, JUST IMPORTED.

used for making cheviots, tweeds, and such business cloths, and commands the top prices. Flocks of breeding ewes average about seven pounds to the fleece. Mature rams weigh three hundred pounds, and ewes something over two hundred."

Sheep husbandry cannot be carried on solely for wool, as was the case a few years ago with great profit, because the price of wool has decreased so much; but, with the larger breeds which mature their lambs at fifty days old, dressing twenty-five pounds and clipping enough wool to nearly pay their keep for a year, no branch of agriculture offers such a profitable investment, provided the farmer going into it knows about the care of sheep, or is willing to begin slowly and learn his lessons by experience on a small scale without great expense.

The above refers to early lambs, to be killed before May. The winter lamb business requires more knowledge and experience than the commoner way of having lambs dropped in the spring after sheep are turned out.

Working on this plan, a large part of the crop of lambs can be sold during July and August for about five dollars apiece, in almost any local market.

Those not old enough to go then can be fed through the winter, taking off a clip of about six pounds of wool in early spring, which pays for their winter's keep.

With the present demand for yearling mutton, any of these larger Down sheep give a carcass heavy enough to bring in five dollars for each lamb so treated.

I cannot impress too strongly the fact that the rams used must be pure bred and of the best quality.

A ram must be as good for raising market lambs as for raising pure bred lambs for breeders.

The difference in value between a lamb sired by the best ram and an inferior one is at least a dollar a lamb.

These rams in the picture were imported for the purpose of raising market lambs from about nine hundred grade ewes.

Yours very truly,

E. F. BOWDITCH.

CHAPTER VIII.

THE BLACK-FACED SCOTCH HIGHLAND.

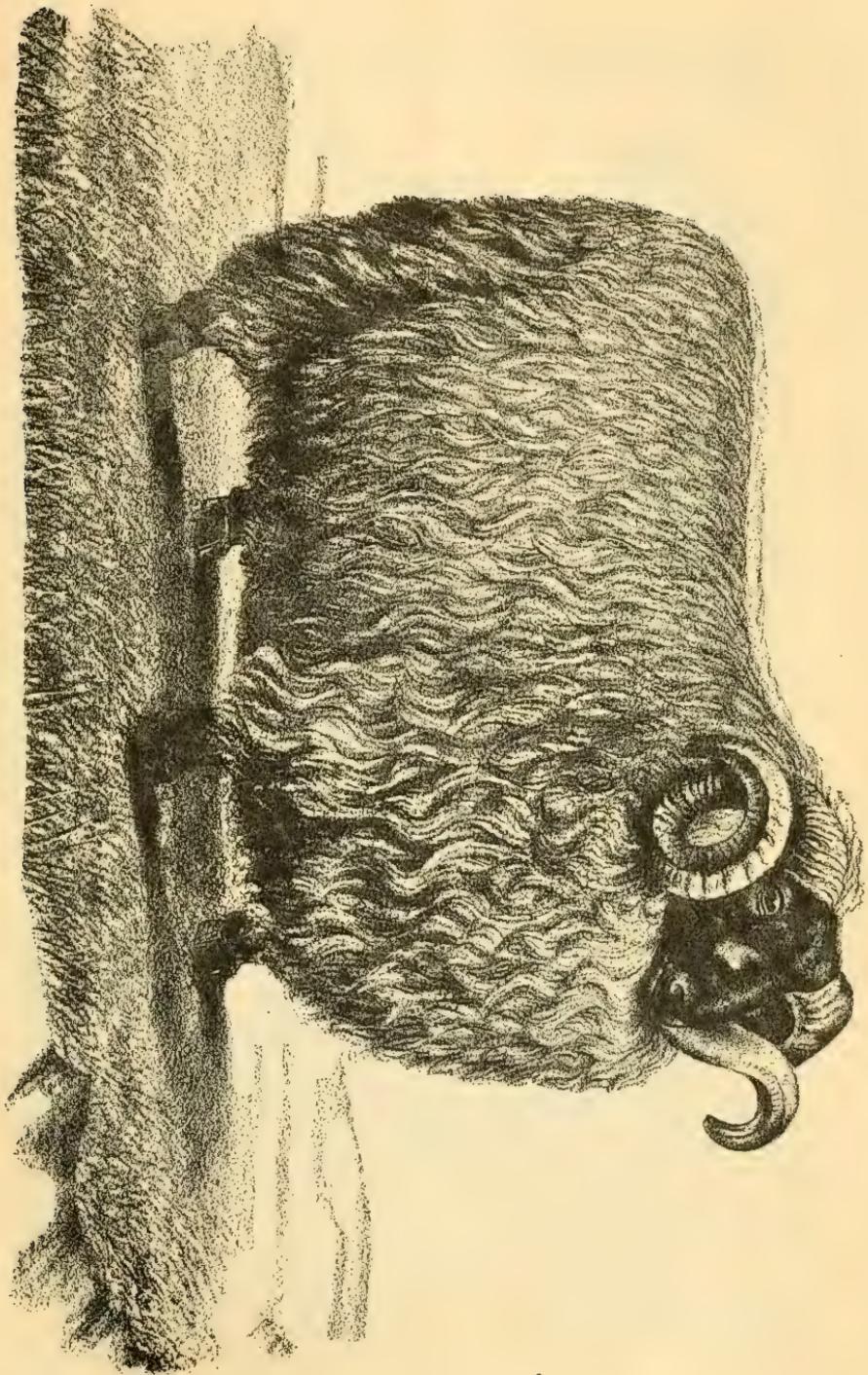
It is not because this almost unknown breed of sheep in America is particularly adapted to Virginia that occasion is taken to illustrate it or describe its salient features in this volume, but because it is interesting to note the extremes in breeding. For a similar purpose is presented a cut of the Infantado ewe on page 3.

The Black-faced Scotch is called in its native place "Heather Sheep," and is a very peculiar breed, habiting the lofty but barren and heathy hills which extend from Derbyshire, England, to the confines of Scotland, through the counties of Cumberland, Lancashire, Westmoreland, and Yorkshire.

This breed possesses characteristics which distinguish it from any other in the British Isles. It is smaller with respect to the weight at which it arrives, but it is larger and more robust than the ancient soft-woollen sheep which it displaced. The rams and ewes have horns very large and spirally twisted, but sometimes disappearing in the ewes. The legs are lengthy and muscular, and the general form is robust. The face and legs are black, and there is a general tendency to this color in the fleece. These sheep are very hardy and capable of subsisting on the coarsest heaths, and would be a valuable breed for exterminating brush, etc.

The mutton has a venison flavor, and is preferred to every other by those

BLACK-FACED SCOTCH.



who have used it. A great defect of this breed, however, is the character of the fleece, which, besides being thin on the body, yields wool only fit for carpets and coarser stuffs. They do not really amalgamate, or cross, with other breeds.

CHAPTER IX.

THE SHROPSHIRE.—A BRIEF REVIEW OF ITS PAST HISTORY AND A CONSIDERATION OF ITS SALIENT FEATURES.

Among the majority of the sheep-breeders of Virginia and the United States who look to wool and mutton as the principal source from which they are to derive a revenue, the most popular breed of sheep is the Shropshire. It is held in high estimation alike in England, Scotland, Ireland, and Wales. In fact, it is the most popular breed in all the United Kingdom at the present moment. It has stood the test among the farmers of the United States for the past seven years, and its popularity shows no signs of abating.

Really, our farmers have never before experimented with an English breed which has taken more kindly to its new home or brought into their hands such large sums of money for mutton and wool. Probably no one has made money any faster from sheep in a legitimate way the past two years than those farmers who have given their attention to the production of early lambs, and for this purpose used the common grade merino ewe with a Shropshire ram. There is nothing more salable to-day for mutton purposes.

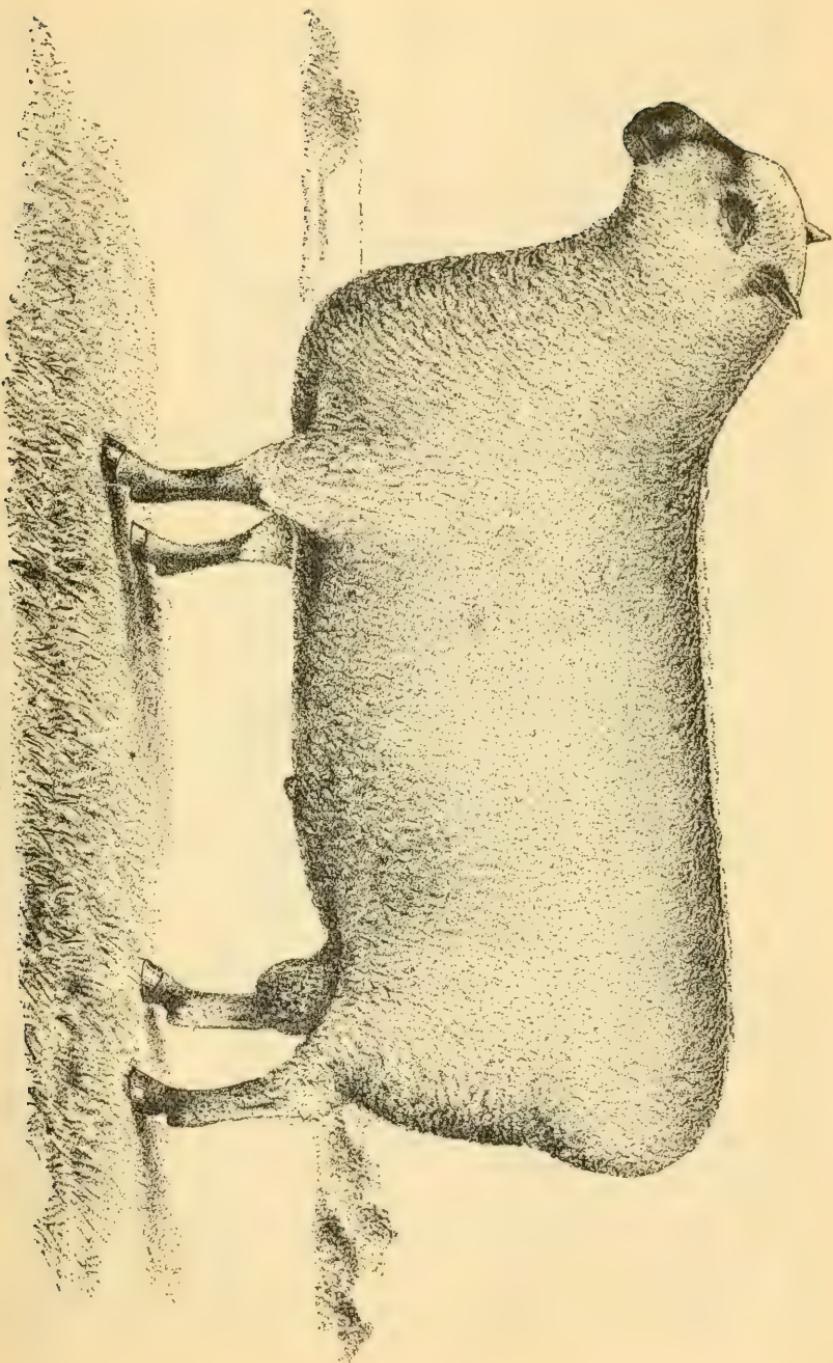
Some one has said, "The early history of the Shropshire, like that of our trotting horses, may be put down as untraced." The Shropshire is clearly composite, or mixed, in its origin; and it is only of comparatively recent date that it has received recognition as a distinct breed. To-day we have the American Shropshire Registry Association, which boasts of more recorded sheep, more active members, and more assets than all the present sheep organizations of the United States, Canada, and England combined. So much for the great popularity they have won. What better evidence could be offered?

The Shropshire Association have, they boast, 23,000 recorded sheep and nearly 600 members, thus showing that they have registered an average of about 3,800 sheep per annum since their organization.

In their histories of various breeds of British sheep neither Low nor Youatt mentions the Shropshire as it exists to-day. In fact, it was only at the Gloucester show of the Royal Agricultural Society in 1853 that it obtained classes. Then afterward it was again dropped out of the prize schedule; but, in response to the powerful representations of breeders, the National Society formally and permanently accorded it a separate class.

The Shropshire of to-day is the product of cross-breeding the sheep of that shire, or county, with the oldest improved breeds, the Southdown and the Leicester. The union of these improved breeds resulted, as it always does, in the formation of a new breed, partaking of the characteristics of each; and the new type was then retained and intensified by judicious inbreeding. Thus the Shropshire has the size of the Leicester, the form of the Southdown, and the fleece is a combination of both, slightly coarser than that of the Southdown and shorter than the Leicester. The fleece also carries more oil than the Southdown.

The face of the "Shrop" is much larger than that of the Southdown, and also somewhat longer; forehead broad, prominent, and slightly arched; ears larger than the Southdown. The color of the face is a softened black, and occasionally a very dark gray, or inclining to gray, on the jaw. The forehead is well covered with wool. The legs are darker than the face, and set



THE SHROPSHIRE.

wide apart; neck strong, broad and deep at the shoulders, tapering symmetrically to the head; shoulders flat, back short, ribs well sprung, hips wide, with long hind quarters and full haunch. They carry fleeces of closer-set fine wool, longer in staple than that of the Southdowns. In good flocks the wool averages 6 to 8 pounds per fleece, hoggets clipping up to 12 or 14 pounds. Shropshire shearlings commonly weigh 20 pounds or more per quarter, and two shears are fed up to 40 pounds or more per quarter.

The Shropshire is generally placed slightly below the Hampshire in size; but the past five years have witnessed a considerable improvement in this respect, and it is doubtful if any real difference now exists. It is smaller than the Oxford, which it resembles less than it does the Hampshire.

The flesh of the "Shrop" is white, dense, and covering not only its body, but coming well down on the legs. Its mutton is regarded as second only to the Southdown, and the extra size of the quarters makes it a most attractive animal for the butcher.

They are exceedingly prolific, at least one-half of the ewes dropping twins; and they suckle better than any sheep of larger breed. They are hardy, and particularly adapted for enduring a wet climate. Rams of the Shropshire breed are much used for crossing inferior classes of sheep, chiefly for the purpose of rearing lambs for the butcher; and the sheep-breeder of Virginia will find no ram which will answer his purpose better on the native mountain sheep which he handles than the Shropshire.

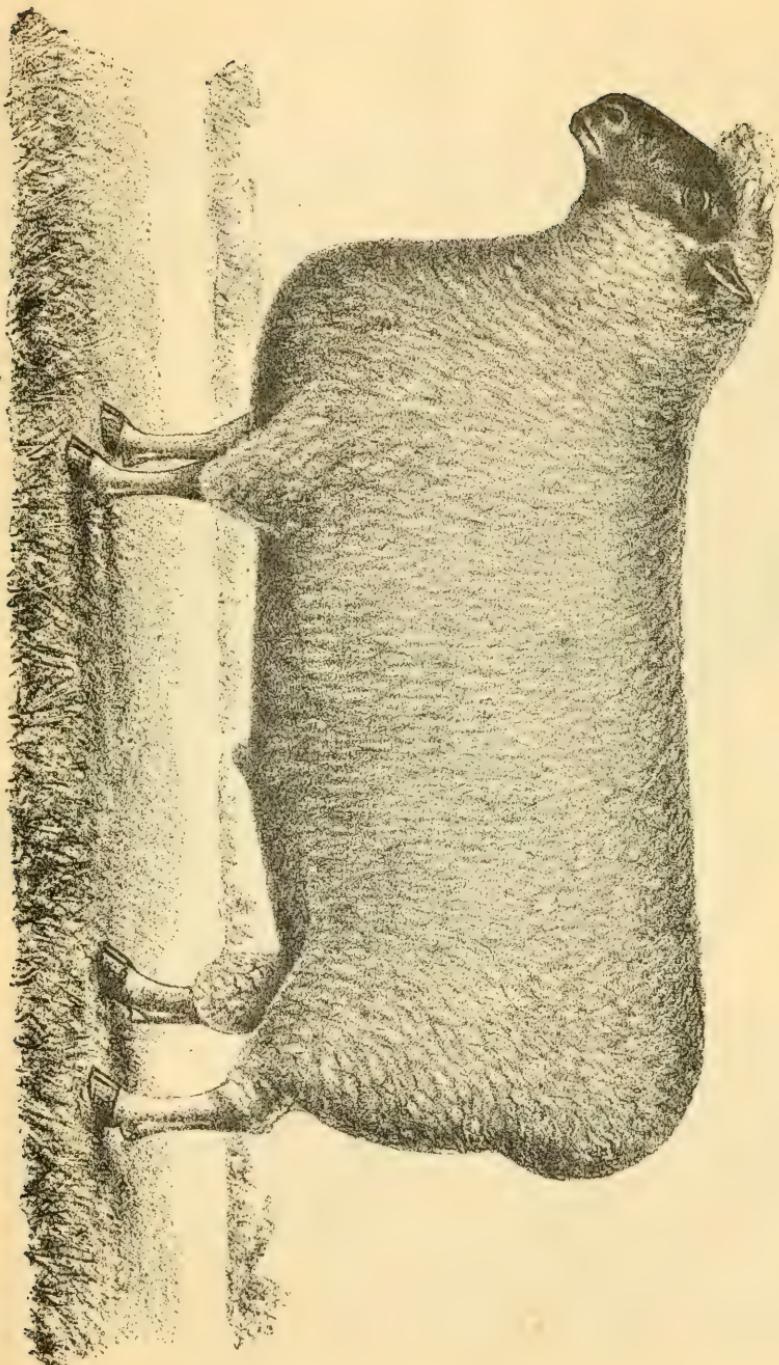
Mr. Mansell, of Shrewsbury, Shropshire, Eng., who is high authority, describes a model ram as follows: "Well-developed head (not coarse), well covered, no horns, with clean and striking expression of countenance; a prominent eye; a body deep and symmetrical, placed squarely as possible on short legs; good leg of mutton; straight spine; deep, well-sprung ribs; massive chest; a muscular neck, well set on good shoulders; nice style and carriage; no inclination to pull or drop wool around jaws or belly; nice cherry skin; face and legs a nice soft black, not sooty nor a rusty brown; no white specks; ears thin and blood-like, not heavy and drooping; moderate bone; wool of the finest staple and as close and merino-like as possible, with no admixture of gray." To prevent deterioration, it is very essential to insist on conformity to the established features of the breed.

In regard to the size of the different breeds mentioned, we find the following interesting figures in a report of the average weight of carcasses of each breed for a whole year at Mark Lane, one of the great English markets:—

	<i>Lambs under One Year. lbs.</i>	<i>Wethers under Two Years. lbs.</i>	<i>Ewes over Three Years. lbs.</i>
Leicester	144	252	290
Cotswold	102	317	283
Lincoln	176	301	383
Hampshire	193	259	266
Shropshire	197	257	235
Southdown	142	206	203
Oxford.....	177	281	274

Elsewhere will be found some opinions of breeders in Virginia, which denote particular favor accorded the Shropshire. To get the most good out of them, however, they must be handled as nearly as possible under the conditions which are natural to them. They are hearty feeders because they are fast growers, and they must have comfortable quarters.

The mutton breeds, it must be remembered, are the product of the very highest agriculture. They have been bred from early maturity to put on flesh rapidly; and, to do this, they must have the food necessary to grow it. One may unhesitatingly advise every farmer in Virginia to try the Shropshire. They will make them money.



THE OXFORD.

CHAPTER X.

THE OXFORD: A BREED WHICH HAS SUCCEEDED WELL ON VIRGINIA FARMS

One of the most meritorious of the British mutton breeds of sheep is the Oxford-down, which, although generally classed as one of the middle wools, is properly rather more closely related to the long-wool family.

The Oxford is generally recognized as the result of a cross between the Hampshire-down and Cotswold; but there is doubtless Southdown blood here, too, which assists to lend more of the Down characteristics. Some authorities hold that the Oxford is really the product of the Leicester, Cotswold, and Southdown crossed together; but this theory is hardly substantiated, if we are to consider authentic the early statements of its breeders. The Oxford is perhaps the largest framed of the Down breeds, and favors in form and fleece the Cotswold. The evident intention of its originators was to grow a sheep which would furnish the largest carcass of meat possible and possessing a quality as good as that of any of the Down breeds, the fleece being a consideration of secondary importance.

Wherever introduced in this country, the Oxford has won friends; and they are challenging older rivals in the race for superiority and popular favor. Within the past few years more attention, too, is being paid to its fleece. The result has been a greater density and fineness of fibre than the breed possessed when first brought into public notice.

It will perhaps be remembered that almost their first introduction into this country occurred in 1876, when a few specimens were shown at the Centennial Exposition in Philadelphia, where they attracted considerable notice. At English shows the Oxford has been recognized as a separate breed since 1862.

The distinguishing characteristics of the Oxford are size, hardiness, and early maturity,—three most important features. It is also possessed of short limbs, is of square build, with a gray or brown face. The nose has a gray or white spot on the end. The legs are a dark brown, smoky color. The fleece is longer, still not as dense as is that of the Shropshire, neither is it as fine. Cotswold blood is plainly detected in the wool from the waviness running all through it.

CHAPTER XI.

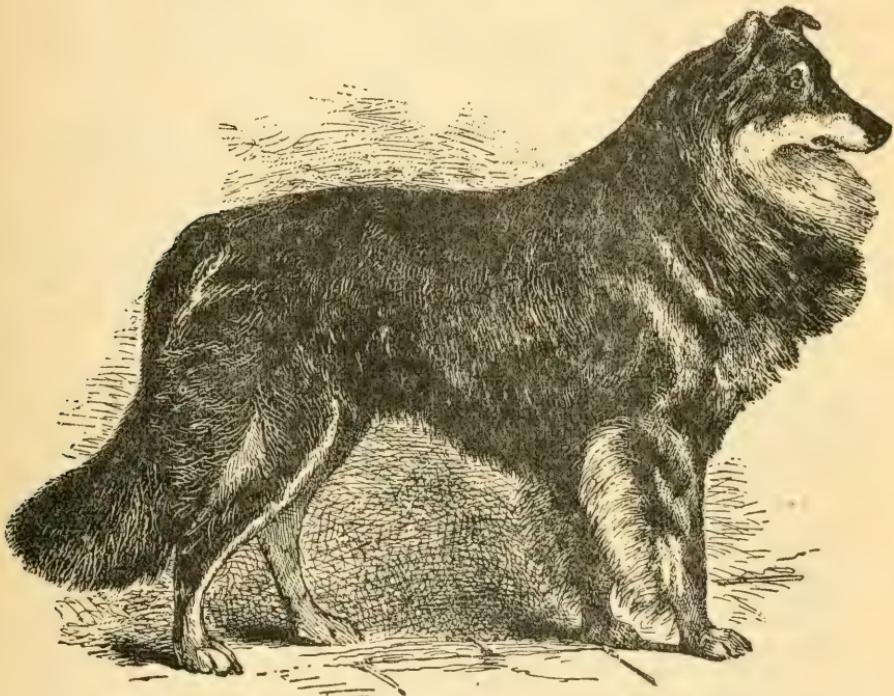
THE SHEPHERD DOG.

Perhaps a book about sheep would not be complete without a few words concerning the shepherd's friend, the collie, whose picture we present herewith.

A very excellent work upon "The Practical Training of the Shepherd Dog" has just been published by W. A. Wickham, of Tipton, Iowa, and can be obtained from him for 50 cents. There are five different kinds of shepherd dogs in the United States; namely, the Scotch collie, the German, Spanish, and Mexican, and the bob-tailed English sheep dog. Of these the Scotch collie is regarded as the best, and is most known. Let us say right here, however, that it will be better for the Virginia farmer to keep no shepherd dog than to have one which is ill-bred or ill-trained. Throughout the North-west many mongrel collies are to be seen,—mainly a bull and collie cross. As a result, an old sow or a grown hog has rarely a whole ear, the ears having been split and torn off by mongrel dogs. But the properly trained sheep dog is a great assistance to the flockmaster.

PROTECTION AGAINST WILD ANIMALS AND DOGS.

In Texas and Mexico they have a way of training dogs with the sheep. The pups, when first whelped, or before their eyes are open, are taken from the dam and put to a sucking ewe, already deprived of her own lamb. For several days the ewe is confined with the pups in the shepherd's hut; and, either from force or an instinctive desire to be relieved of the contents of the udder, she soon allows the little strangers to suck, and in the course of a few days more becomes quite reconciled to the change and exhibits a great degree of affection for her foster children, who, knowing no other parentage, become thus early engrafted into the general community, and return their early kindness by every mark of affection and fidelity hereafter, never being willing for a moment to quit their society, but remain with them



THE SHEPHERD DOG.

night and day, expressing a peculiar attachment to this particular flock, and seeming able to distinguish each member of it from all other intruders. The collie will also bring the sheep home in the evening, if you feed him regularly at the hour you wish the flock home. The South American shepherd's dog becomes accustomed, when a puppy, to its future companions. Taken when very young from its mother, it is held three or four times a day to a ewe. A nest of wool is made for it in the sheep-pen, and no dog or children allowed to come near.

In the great north-western section of the United States bells are quite generally used upon the sheep as a protection against dogs and even wild animals. There is also a large and growing class of breeders in the Eastern States who place great weight upon the protective power of sheep bells. They show by their constant use of these little "alarmers" their faith in the

idea that they actually drive away dogs. Some flockmasters put a bell on every fifth sheep.

If a few dry cows or heifers are kept in the field with sheep, the dogs will seldom molest them. Sheep have been found in the morning huddling so close around and under a friendly old cow that she could not get away from them; she had saved their lives.

CHAPTER XII.

PASTORAL VIRGINIA: ITS CLIMATE, SOIL, AND ADAPTABILITY TO SHEEP HUSBANDRY.

In the course of a recent trip over the line of the Norfolk & Western Railroad in company with President Harrison and party, Secretary of Agriculture Rusk was furnished with a revelation in viewing the fertile hills and valleys of Western and Southern Virginia. The question occurred to him at once, Is this not one of the most magnificent regions in the world for sheep-raising?

As he noted the character of the soil, the richness of the splendid pastures, and the evident thrift of the few flocks of Cotswolds, Southdowns, and native sheep grazing on the hillsides, he became convinced of the absolute correctness of his opinion; and his exclamation was, "Every farmer in South-west Virginia ought to grow rich from raising sheep and wool."

In his opinions Secretary Rusk was quite correct. No visitor to these valleys of Virginia, through which the great Norfolk & Western system passes, who will take pains to investigate the natural resources and conditions of the country, can fail to arrive at any other conclusion. It is pre-eminently a pastoral region, the natural home of the sheep.

The extent of this territory is large, its opportunities infinite. The northern terminus of the Shenandoah Division of the Norfolk & Western Railroad is at Hagerstown, Md., the southern at Roanoke, Va. Here intervenes a distance of 239 miles of some of the finest sheep country in the United States. The southern terminus of the Norfolk & Western Railroad is at Bristol, Tenn. Between Roanoke and Bristol we have a stretch of country 151 miles in extent. At Radford, about midway between Bristol and Roanoke, the New River Division leaves the main line, extending to Norton, Va., a distance of about 160 miles. Between Roanoke and Bristol and between Radford and Norton lies some of the finest sheep country in the world,—thousands of acres of cheap, elevated lands, covered with nutritious and fattening "blue grass," such as has made Kentucky mutton famous the world over.

While the sheep is tolerably cosmopolitan in its adaptability to climate, yet it is very susceptible to influences of soil and water. Hilly or rolling lands, provided with quick drainage, pure, flowing water, and sweet grass, are best adapted to successful sheep husbandry in any of its branches. The hills and valleys of Virginia meet all these requirements, leaving little to be desired by the sheep-breeder, whether his aim be to grow wool or mutton. The eastern division of the Norfolk & Western Railroad, extending from Roanoke to Norfolk, covers a distance of 257 miles and a country well suited to sheep. In fact, it would be difficult to find in all Virginia a spot where sheep and wool could not be successfully grown.

The section of which particular mention is made—the valleys and hilly portion of West and South-west Virginia—is strictly a limestone country, more than 300 miles in length and with an area of nearly 6,000 square miles. To those who have travelled or resided in the States of Vermont and New Hampshire a striking similarity between Virginia and this portion of New England is remarked. Vermont and her sister commonwealth are noted for their fine Spanish merinos and prime Cotswolds and Southdowns. Why should not Virginia possess equally as wide a reputation for her flocks? It only remains with the farmers to earn a credit even more

renowned. The natural advantages at hand are far superior to those of New England. All that is necessary is to improve them.

The prevailing soil of pastoral Virginia is a limestone or a stiff, clayey loam, durable and fertile and well adapted to grass and grain. Being rich and warm and enjoying sunny exposures, it is a land particularly inviting to the sheep-breeder. Throughout this great area of mountainous country, the hills, rising to considerable heights, are wooded in most instances, still tillable to their summits. To the stranger it is a very remarkable sight to see the green pastures and the cultivated fields on these high points. Another remarkable fact, too, is that just as soon as the timber is cleared away the blue grass immediately appears, furnishing excellent pasture in less than twelve months. Between all these hills course those rivulets and rills of pure, sparkling water from which sheep, one of the most particular of domestic animals, delight to drink.

As to climate, there is scarcely any more equable than Virginia's. The mean average temperature of the State being 56° and that of the rich valley regions 54° , the extremes of heat and cold are not great, and stock consequently rarely suffer from exposure. A prominent sheep-breeder at Pulaski, Va., who has kept a record of temperature for a series of years, reports the mercury at that point has not fallen 12° below zero, and that there are not ten days in the year when it will range as low as 10° above zero. The summer heat, he finds, seldom ranges above 90° , and the nights are always cool. This statement would apply almost equally well to all of Western and South-western Virginia, and, in fact, to the State in its entirety. With such climatic conditions—a high, dry land, clear, pure atmosphere, and freedom from dampness—sheep are always healthy, foot-rot and other afflictions are of rare occurrence, and losses in the flock from any disease are seldom suffered.

The State of Virginia has, according to the report of the Department of Agriculture, about 450,000 sheep. Now these sheep are, all of them, allowed to run out in the fields the year round. The sheep-breeder of Virginia need not to shelter his flock save during some severe storm or occasionally for a day during the winter season when the snow may hinder their grazing. Feed is quite sufficient the year round to supply their ordinary wants and keep them always in good flesh.

CHAPTER XIII.

HOW TO START A FLOCK IN VIRGINIA.—PROFITS FROM WOOL.

To those who may be anticipating starting a flock of sheep in Virginia, a word of advice will perhaps be acceptable.

Many farmers would hardly care to commence by purchasing a flock of registered ewes from Northern flocks, because the cost would be too great, unless they proposed to establish a breeding farm on which to raise choice rams for the trade; *i.e.*, for the improvement of stock, which no doubt could be pursued with profit. And so, unless he preferred to secure a few choice ewes served to ram, which would be preferable, his next best plan would be to go back into the mountainous sections of West Virginia, North Carolina, or Tennessee, considerably removed from railroads, and purchase a flock of native sheep, which can be had at from \$3 to \$4 per head, drive them to his farm, and, when the breeding season is at hand, serve them to a pure bred ram of whatever breed suits his fancy, whether Cotswold, Shropshire, Southdown, Oxford, or any of the other English breeds. The rams can be had at from \$15 to \$30 each. Thus the farmer could commence a flock which will involve but a comparatively small outlay.

The policy of the sheepmen, as a general rule, in Virginia, has been to change their sheep nearly as often as every two years, selling out entirely,

and then commencing anew. Of course, those who have done this are only the farmers who have bred the native sheep to improved rams; for a farmer having a good flock of pure bred animals could not afford to part with them. It is the belief among the breeders that this is necessary, in order that the flock continue healthy.

When sheep are kept in the same pasture for a considerable time, they are quite apt to evince distastefulness toward the feed, and a change is beneficial; but, if the farmer has a number of pastures and not too large a flock, it will hardly be necessary to change so often, and, if a little science is exercised in care, not at all. The number of sheep kept to the acre should not exceed one, unless clovers or other artificial grasses are grown.

It has also been the plan of a number of breeders, or, what is a more proper term, speculators, to realize three profits from handling sheep yearly, first by buying a party of grade ewes in the fall, shearing and selling their wool in May, the lambs from them in June and July, and finally the original purchase, fattened, in October for mutton. This plan, however, tends to make sheep more scarce, when it is an increase of flocks that is so much needed in Virginia.

Shearing should occur between April 15 and May 15, even earlier than the former date, if quarters are provided in which shelter can be had if a cold day should occur. Farmers who have kept sheep in Virginia are, many of them, of the opinion that, even if kept for wool alone, sheep would pay; and there is little doubt that they will when the benefit they are to the farm is considered.

Sheep are the safest and best general stock for the farmer to handle, and their manure is the very best of fertilizer. If you get hard pressed, you can sort out a few or enough to meet your present demands, and they will almost always meet with a ready sale. Sheep are the best kind of stock to clean out briery or bushy fields. They will eat almost anything of a weedy nature. For the fields' sake it pays to keep sheep.

Wool in Virginia for the past few years, averaging about 25 cents unwashed, has most of it been taken by local buyers for Philadelphia, Boston, and Baltimore markets. It is a favorite staple with worsted spinners, being strong and well grown.

CHAPTER XIV.

THE DOG NUISANCE.—THAT WORTHLESS CUR.

So long as love for the worthless cur holds sway in the home of the Virginia farmer, so long must the cause of the meek and lowly sheep be held in subjection, and continue to languish.

Sheep-breeding and wool-growing is an industry which the farming classes of Virginia can pursue with profit. They should seek to diversify the products of their farms, and thus have something that will always sell for good prices. There are some classes of products that are enormously high in the markets of the State, others that are sold by the farmers at low prices, among them being beef cattle. Mutton, however, commands a very fair price, and is steadily growing in favor daily. There is plenty of land in Virginia that is adapted to sheep-raising, and some that is not suited for much else; but, as long as the dogs are allowed to outnumber the sheep, these extensive tracts cannot be properly utilized. Now, this seems a very unthrifty condition of affairs, and certainly suggests that the farmers care little whether they make farming a financial success or not.

Not many years ago the legislature of Tennessee passed a law taxing dogs, the object of the measure being to reduce their number, and thus make sheep husbandry possible. Note with what spirit this movement was received. If a law had been framed and passed to slay the first-born in

every family in Tennessee, it could hardly have met with more general hostility or more noisy demonstration. Nothing could have been more unpopular. It proved the political death-knell of every member of the legislature who supported it, and those who were elected to the succeeding session went there with pledges to repeal it. The law was repealed; and dog-raising rather than sheep-raising is given precedence to-day. Now, in a greater or less degree, this same condition of affairs exists in Virginia and in other Southern States.

Worthless dogs are the curse of the entire South ; and, so long as they are tolerated, wool-growing and sheep-raising must remain crippled. With the enactment of proper laws, however, she may hope to become a wool-growing section of much prominence, thus producing the bulk of the raw materials entering into the manufacture of textile fabrics.

Following is the law relating to dogs in Massachusetts. Let there be a similar one enacted in Virginia. The majority of ravages among sheep are perpetrated by the mongrel species which have no excuse for living, and are the property of people who cannot afford to keep dogs.

MASSACHUSETTS DOG LAWS.

CHAPTER 102.

SECT. 94. Any person may kill a dog that suddenly assaults him when he is peacefully walking or riding without the enclosure of its owner or keeper; and any person may kill a dog that is found out of the enclosure or immediate care of its owner or keeper, worrying, wounding, or killing neat cattle, sheep, or lambs.

SECT. 95. If a person so assaulted, or finding a dog strolling out of the enclosure or immediate care of its owner or keeper, within forty-eight hours of such assault or finding, makes oath thereof before a justice of the peace or police court for the county, or before the clerk of the city or town where the owner of the dog dwells, and further swears that he suspects the d'g to be dangerous or mischievous, and gives notice thereof to its owner or keeper, by delivering to him a certificate of such oath, signed by such justice or clerk, the owner or keeper shall forthwith kill or confine such a dog; and, if he neglects so to do for twenty-four hours after such notice, he shall forfeit ten dollars.

SECT. 96. A person owning or keeping a licensed dog who has received such notice, and does not kill the dog or keep it thereafter from ever going at large, shall forfeit ten dollars, if it is proved that the dog is mischievous or dangerous ; and any person may kill the dog if it is again found strolling out of the enclosure or immediate care of its owner or keeper.

SECT. 97. If a dog, after such notice to its owner or keeper, by such assault wounds or causes to be wounded any person, or worries, wounds, or kills any neat cattle, sheep, or lambs, or does any other mischief, the owner or keeper shall be liable to pay the person injured thereby treble damage, to be recovered in an action of tort.

SECT. 98. Whoever suffers loss by the worrying, maiming, or killing of his sheep, lambs, fowls, or other domestic animals by dogs, may inform the mayor of the city or the chairman of the selectmen of the town wherein the damage was done, and determine whether the same was inflicted by dogs, and, if so, appraise the amount thereof not exceeding twenty dollars. If, in the opinion of said mayor or chairman, the amount of said damage exceeds twenty dollars, he shall appoint two disinterested persons, who, with himself, shall appraise the amount thereof ; and, in either case, he shall return a certificate of the same, except in the County of Suffolk, on or before the first day of December, to the county commissioners, who during the month of December shall examine all such bills, and if any doubt exists, may summon the appraisers of all parties interested, and make such examination as they think proper, and shall issue an order upon the treasurer of the county in which the damage was done, for all or any part thereof, as justice and equity may require.

The treasurer shall annually, on the first Wednesday of January, pay all such orders in full, if the gross amount received by him for dog licenses, and not previously paid out under the provisions of this chapter relating to dogs, is sufficient therefor. Otherwise, he shall pay such amount *pro rata* upon such orders, in full discharge thereof.

The appraisers shall receive from the county or in the county of Suffolk from the city or town treasurer, out of the moneys received under the provisions of this chapter relating to dogs, one dollar each for every such examination made by them ; and the Mayor or the chairman of the selectmen acting in the case shall receive twenty cents per mile one way for his necessary travel.

SECT. 106. Every owner or keeper of a dog engaged in doing damage to sheep, lambs, or other domestic animals, shall be liable to an action of tort to the county for all damages so done, which the County Commissioners thereof have ordered to be paid, as provided in this chapter. The treasurer of the county may, and,

if so ordered by the County Commissioners, shall bring such action. In Suffolk County such owner or keeper shall be liable in like manner to the city or town for damages so done therein which the Board of Aldermen or Selectmen respectfully have so ordered to be paid; and the treasurer of such city or town may, and, if so ordered by the Board of Aldermen or Selectmen, shall bring such action.

The laws of Maine, New Hampshire, and Vermont, and of the remaining New England States, are almost equally as stringent, as are also those of Ohio and many other wool-growing States of the East.

CHAPTER XV.

DISEASES OF SHEEP.

The two diseases to which sheep are most liable are "foot-rot" and "scab." The latter has existed from time immemorial, and injures both the wool and meat of the animal. It may originate from lack of care, insufficient food, or exposure to cold and wet. The prevailing cause of scab, however, is contagion; and, while it may be easily prevented or cured by "dipping" in a solution of tobacco or other preparation, of which there are many excellent ones in the market, it is a dangerous disease when not properly treated. The prevailing practice among owners of large bands of sheep in the United States is to dip them immediately after shearing. Scab is a disease of the inner skin of the animal. The famous firm of William Cooper & Nephews, whose American offices are at Galveston, Tex., and 5 South Franklin Street, New York, employ upwards of 200 men at their English factory in the manufacture of the sheep dip with which three generations of Coopers have been identified. This dip improves the quality of the wool as well as curing the scab.

Foot-rot, as its name implies, is confined mainly to the feet, and is generally the consequence of a soft and marshy pasture. The sheep abhors moisture, both overhead and underfoot, and its feet are constructed for rough ground. The foot is composed of two digits, or toes, each shod with a hoof composed of the crust, or wall, and the sole. The crust, being harder and tougher than the sole, is mainly intended to resist the wear and tear to which the foot of the animal is exposed. Any situation, like soft and marshy ground, which has a tendency to increase the growth of the hoofs without wearing them away, causes the crust to grow until it laps over the sole, like the loose sole of an old shoe, and serves to retain and accumulate earth and filth, or is broken off in detached parts. In this way, the quick may be exposed and new pores opened, into which particles of earth or sand force their way, until an inflammation is started which alters or destroys the whole foot. The ulceration of foot-rot is followed by maggots, and eventually by constitutional disturbance which may cause the death of the animal.

This disease, however, is also easily managed by paring away the detached portions of horn and thoroughly washing the foot in chloride of lime, dissolved in the proportion of one pound of the powder to a gallon of water. There is a difference of opinion among authorities as to whether foot-rot is infectious or not, but it is safest to prevent the sheep which has been attacked with the disease from rejoining its companions while there is the slightest discharge from any part of the foot.

While the two diseases already named are those to which the mature sheep is most liable, the lamb is of course subject to the usual proportion of diseases of infantile animal life. With proper care, however, sheep multiply rapidly, and the increase in lambs may be made a greater source of revenue even than the wool.

CHAPTER XVI.

SOME REASONS WHY WE SHOULD BREED SHEEP.

Not unlike many other lines of agricultural pursuits, sheep-raising is to a certain extent experimental and speculative; yet there are so many things that can be said in favor of the occupation that it would appear reasonable that farmers, even if they have but a few acres of their own, should consider the feasibility of keeping at least a few sheep.

Sheep-breeding, unlike dairying, is not so exhaustive of the soil, but, on the other hand, is almost a necessary adjunct in preserving the fertility of same. Moreover, the fact that sheep are the destroyers of weeds and briars that other stock will not touch should not be overlooked. It may rightly be said that "the sheep's foot is golden"; for it, in every instance, brings improvement, and not depletion, to the soil. The statement made by a reliable authority—although, perhaps, pertaining more directly to the mutton breeds—that but two-thirds the amount of food is required, when consumed by sheep, to produce a given result, which is required by other domestic animals, is a strong factor in favor of our breeding sheep more extensively. There are many other points equally as strong. A method that promises to restore productiveness to the land, and in the mean time be productive of profit in other ways, should, on the worn-out farms of the Eastern States certainly not be overlooked. There are but few farm animals that produce more valuable manure than sheep.

In considering the matter of soil exhaustion, Professor Stewart states that a fleece of five pounds of wool grown in a year requires only a daily growth of one-fifth ounce, and that the mineral matter taken from the soil by the fleece is but 1.6 ounce per year; and, if six half-mutton sheep represent a cow, the whole mineral constituents taken by the six fleeces would only be 9.6 ounces and about 1.9 pounds of nitrogen, while the ordinary cow, yielding 4,000 pounds of milk, would take 26 pounds of mineral matter, or ash, and 25 pounds of nitrogen, or forty-three times as much mineral matter and thirteen times as much nitrogen as the sheep. However, this is, of course, not considering all the elements of waste in feeding sheep, but is conclusive evidence that sheep husbandry, as compared with dairying, takes much less strength from the soil.

Do not overlook the fact that the productiveness of your farm is largely involved in what you are doing. At times the price of wool may rule low, mutton may not be in demand, yet there is almost sure to be enough sales of each during any year to pay the expenses of a flock of sheep, without even considering the increased value they are sure to bring to farming lands.

A good flock of sheep is the best helper, not only in filling the purse, but in keeping up the condition of the land without really any extra expense; that is, within reach of the husbandman. One thing should therefore be remembered by farmers who have suitable land at their command: that they make a very great mistake, and submit to annual loss of more importance than they imagine, in the absence of a good flock of improved sheep browsing upon their hills.

CHAPTER XVII.

HOW SHEEP PAY IN VIRGINIA.— SOME FACTS FROM THOSE WHO KNOW BY ACTUAL EXPERIENCE.— THE SHEEP BEST SUITED TO THE STATE.— SOME HINTS ABOUT CARE, ETC.

There are many good reasons why every farmer in Virginia should keep sheep. Every man and woman who till the soil on which they reside should keep at least a few sheep. If a good account of expenses and sales

is kept, there will always, with the exercise of decent care, be a balance in favor of sheep-breeding,—not so much as a specialty, but as an assistant to other farm animals and crops.

In the compilation of this volume on sheep and wool, a number of the leading sheep-breeders of Virginia were interviewed, with a view of ascertaining actual results from keeping sheep in the "Old Dominion." Not one of them acknowledged having lost a dollar in sheep, but all were able to show on their books handsome profits; and all expressed enthusiasm over the prospects for growing mutton or wool in their State, and a desire to increase their flocks immediately.

Colonel James Macgill, at Pulaski, Wythe County, has 130 pure bred Shropshires, bred from imported stock, which have thrived wonderfully on Virginia pastures. He considers this breed especially adapted to the State, particularly to farms where only small flocks are desired. Of course they do not, like Merinos, thrive so well in large flocks, neither do any of the English breeds. They are apparently designed by nature for a moderate area and for small flocks. So are the Oxford, the Southdown, Hampshires, etc.

Another feature in breeding which Colonel Macgill reports is the remarkable prolificacy of his flock. This is noted everywhere, in fact, among all Virginia bred sheep. Colonel Macgill reports that from a flock of 38 ewes he raised 68 lambs, and that he also has 5 ewes which produced last year 15 lambs. He estimates his increase per annum nearly 190 per cent.

Mr. James B. Caddall, at Pulaski, also reports splendid success with his flock, and states that Shropshires, Southdowns, and Oxfords are certainly the breeds best adapted to Virginia. His success is shared in by such breeders as D. P. Watson and James B. Painter, of Pulaski; James H. McGravock, J. M. Crockett, and H. J. Mathews, of Max Meadows; and the majority of other prominent breeders throughout the great valley of Virginia.

As the raising of mutton lambs is the principal feature of the sheep industry in Virginia, and must ever remain so, the sheep selected should be those best suited for early and rapid development, most easily fattened, and that will furnish the most marketable carcass. As a first-class mutton sheep, the Southdown, Shropshire, and Oxford are without a peer, and can be strongly recommended to the farmers of Virginia. The other breed, of which mention is made, are also certain to do well if given proper handling.

It is advisable that the Virginia breeder arrange to have his lambs dropped either in January or February, that they may be ready for the June and July market. The farmers now engaged in raising mutton for market report that they find it a very easy matter to make their lambs, at five months of age, weigh 100 pounds, ar. that, if they are ready for market in June or July, they rarely fail to realize five cents per pound, live weight, for their marketable stock. What farmer can ask for anything better than this? For the amount invested and the time given, what is there, after all, that pays better than growing mutton? The mutton of Virginia is of recognized superiority. Its market at present is principally New York and Philadelphia, where it commands the very "top" price, even exceeding the toothsome mutton of Kentucky. So much for her rich blue-grass hills and valleys. Another advantage which the State possesses over Kentucky is its nearness to the great seaboard consuming centres. Still another may be discerned in what follows:—

Virginia is at present experiencing a great industrial development, which is really only commenced. Already a large percentage of her population are engaged in her shops, foundries, mills, and mines; and the number is being steadily augmented. Who are to feed this great army of tradespeople, these laborers, this great industrial population? Is it not best that the farmers of Virginia should "fill the bill"? Is it not best that a home market for farm products should be sought? Surely, here is one of the most promising openings for the growing of mutton ever afforded the

farmers of any State in the Union. Let Virginia improve this opportunity. David's "few sheep in the mountains" paid his taxes and a good deal more. They were a wheel in his clock which he could not afford to take out. They are a farm animal which no farmer can afford to neglect, much less a Virginia agriculturist.

CHAPTER XVIII.

SHEEP AT LAMMING TIME.—SOME HINTS ABOUT THE CARE OF YOUNG LAMBS.

It is obvious to those having experience in handling sheep that during the lambing period it is far better to divide the ewes into as small flocks as possible, as they can be manipulated much better and their young will be less in danger of being trampled under foot. In a large flock, it frequently happens that young lambs are injured at feeding-time, when grain is given the ewes in the yard outside the paddock; for, in their anxious scramble to reach their feed, they take no thought of their young, but ruthlessly rush forward, crowding the little ones hither and thither.

Particular pains should be taken to provide plenty of pure running water for the ewes, and it is also advisable to supply them often with salt. We should deem it an absolute necessity to have everything quiet, wherever the sheep are at this period. The shepherd should move carefully among his flock, lending assistance here and there, ministering to the weak ones and exercising care and strategy in handling the timid young ewes, who are disposed to ignore their first born. Sheep are the most nervous and sensitive of farm animals. They quickly notice changes, and are easily disturbed by them. Therefore, great care should be taken to allow no dogs to come within sight or scent of the barns or pastures, or any unnecessary disturbance to occur. In handling sheep at lambing-time, one's patience and perseverance are sometimes severely taxed. However, in the end, he who exercises both will succeed.

Among well-informed stock-breeders it is generally accepted as true that the feeding of roots, either carrots or beets or even potatoes, to breeding ewes during the lambing season and until the new grass is plentiful produces most beneficial results in the way of increasing the flow of milk. It is a good plan to commence the feeding of roots a month, at least, before lambing. In feeding them, sprinkle on a liberal supply of bran, or bran and meal, mixed in equal quantities. As well as roots, always feed the best of hay; and feed regularly, three times each day, if your sheep are not out to pasture.

In the North, where the sheep-breeder has warm and comfortable quarters for his stock, it is often advisable to shear the ewes before the lambs come, as, with the wool off, less trouble will be had in teaching the lamb to partake of its food; and the fear of their eating wool will also be avoided. Often young lambs stand for quite a length of time, and pull the wool from their mother and devour it with evident relish. However, we are unable to account for this unnatural craving; but we do know that there has been many a lamb lost from this source. One thing which does young lambs more good than almost anything else is warm sunlight. Who can imagine a more pleasing sight in farm life than to see a flock of thrifty young lambs capering about the sheep pasture or yard on a bright, sunny day? Then, after their frolic, to see them all lie down together and enjoy a sun-bath.

There is really a great deal of pleasure to be derived in handling and caring for sheep; but to make this vocation, as well as any other, a successful one, the breeder must feel a pride and love for it, and keep his mind keyed up to that point, when the labor and attention it requires are accorded as a matter of pleasure, to secure for himself the stimulus of a generous and growing enthusiasm, and to elevate himself above the level of slipshod systems, which are the source of universal disappointment and failure.

CHAPTER XIX.

PRIZES TO WOOL-GROWERS.

THE AMERICAN WOOL REPORTER, the publishers of this pamphlet on sheep and wool, offer a list of prizes to wool-growers, which shall have the effect of stimulating improvement in some of the present methods of production and preparation of wool for market in the United States. Instead of offering premiums for the heavy fleeces which are so popular at country fairs, and in which the dishonest use of linseed oil and lamp-black but add to an already existing excess of grease developed by theories of breeders which are contrary to the true interests of the wool industry, their prize for weight of fleece will be confined to scoured wool. In a similar manner they seek to discourage the use of sisal twine, and the growth of monstrosities in length of fibre and in wools shown from the wrinkly merinos so much affected by many American breeders, but which are shown to be unnatural by the manner in which outraged nature develops coarse hairs in the wrinkles, which would otherwise afford the poor animals even more discomfort than is inflicted upon them by the artificial modifications of the breeders.

THE REPORTER's list of prizes will consist of a solid gold watch suitably inscribed for the best sack of wool in each of the following classes:—

For the sack containing any number from 30 to 40 of the cleanest and most neatly packed fine washed fleeces, shorn by any American wool-grower east of the Mississippi River, during the season ending Aug. 1, 1891.

For the sack containing 30 to 40 of the cleanest and best handled fleeces of unwashed wool grown west of the Mississippi River, during the season ending Aug. 1, 1891. In this class especial attention should be given to freedom from manure, tags, etc.

For the sack containing 30 to 40 fleeces which shall average the largest yield of scoured wool, of not exceeding twelve months' growth, grown upon American merino sheep, during the season ending Aug. 1, 1891.

For the sack containing 30 to 40 fleeces of long-staple merino or fine delaine wool, of not exceeding twelve months' growth, which shall be decided to be the soundest, best grown, and most desirable, grown during the season ending Aug. 1, 1891.

For the sack containing the most desirable 30 to 40 fleeces of No. 1, or half-blood wool, grown during the season ending Aug. 1, 1891.

For the sack containing the most desirable 30 to 40 fleeces of Saxony merino wool, grown in the United States during the season ending Aug. 1, 1891.

The sacks of wool to be entered in competition for this list of prizes may be consigned directly to **THE AMERICAN WOOL REPORTER**, 19 Pearl Street, Boston, Mass., or they may be forwarded to that paper through the commission house which will afterward have the sale of them. If consigned directly to **THE REPORTER**, they may be transferred after the prizes are awarded to any wool merchants whom the shipper desires, or they will be sold for the account of the shipper.

No wools will be received for competition after Aug. 1, 1891, and no fleeces will be entitled to competition at any time if tied with sisal twine, and in every case a minimum amount of twine must be used. Neither shall fleeces with locks or refuse of any description in them be allowed to compete, and bellies, etc., must be sent separate. The purposes for which these prizes are offered are such as is believed to be most useful to the American wool industry. They are designed not only to encourage the production of desirable wools, but also to encourage greater care in the preparation of both washed and unwashed wools for market. **THE REPORTER** is especially anxious that there should be good competition for the prize for

No. 1, or half-blood, wool, since it is very important that American growers should be encouraged to produce this class of wools more largely than at present. Not only do the sheep which grow these wools yield the very best mutton, but there is always a scarcity of No. 1 wool; and it is firm in price when other grades are weak.

It is to be hoped, however, that there will be keen competition for all these prizes, and the successful competitors will not take any more satisfaction in winning the testimonials which are offered than THE REPORTER will in bestowing them. The judges who will award the prizes will include some of the most experienced sheep and wool men in the United States. Let Virginia sheep-breeders interest themselves in this competition.

A WESTERN MAN TRIES SHEEP IN VIRGINIA.

WHAT HE SAYS OF THE STATE.

ALBUQUERQUE, N.M., May 5, 1891.

Mr. CHAS. G. EDDY, Vice-President N. & W. R.R., Roanoke, Va.:

Dear Sir,— Your favor of the 24th reached me a few days ago, and in reply will say: The sheep enterprise in which I am interested is located in Halifax County, the nearest railroad point being "Lennig," on the Lynchburg & Durham Railroad, about forty miles south of Lynchburg. We have about 1,800 acres of land there, and believe we have the foundation for a prosperous business in the sheep line. We took 1,100 head of choice sheep from the West about December 1 last, and thus far have no reason to believe that they will not prove profitable. We have had quite a number of sheep die, I hear; but it was due to our lack of preparation more than to any local cause. On the cheap lands of Virginia and the South in general there is no reason why sheep should not be grown as successfully and more profitably than on higher-priced lands in the West. Living, labor, and all items of expense are lower than in the West; and, while feed and forage are naturally higher, the increased profit of being nearer market, we believe, overcomes this one item. The average winter period is short; and, with reasonable care, sheep-raising can be made prosperous and of great benefit to the whole Southern country. Their value alone for fertilizing the worn-out lands of the old plantations is incalculable, and lands appreciate in value after several years' pasturing of sheep on them.

We expect to ship in a few carloads this fall again, if nothing happens to prevent; and, if we buy in Texas or South-western points, we can ship *via* your road with satisfaction to Lynchburg. If we felt that they could be handled successfully, we would not hesitate to ship several cars for sale, though the distance is long, and it would not be wise to do so without definite contracts with parties East, and a cash deposit to guarantee us from loss. We would propose to ship only breeding ewes, of course; and our own would be bred in the West, to save the necessity of buying and caring for rams during the winter. We would contract to deliver ewes at a stated price, served with ram in the West for lambing at about the right period East, if such course was thought desirable by the buyers. Then for a second season they would have to provide themselves with rams.

The Shenandoah Valley, from Hagerstown to Bristol, is a higher-priced country than where our place is located, we think; and, outside the more severe winters, it may be preferable to our locality. There are now many sheep in the section you name, we have been told; but farmers cannot raise too many sheep. Common Virginia sheep can be bought, a few head at a time, for less money than our band cost us. But the sheep

we are handling are of merino blood, and desirable to breed up from. I am of the opinion that farmers would hesitate to pay \$4 or \$4.25 per head for sheep, though they might do so for sheep bucked, as we suggest. They certainly are profitable at the price. Our band cost us \$4 laid at our station.

Wherever sheep-growing has been made a success, it has enriched the country in more ways than in the mere profit accruing to the grower. It is a good industry to foster. Here in the West, on free grass, sheep are run at small expense; but losses are large, and transportation to market so expensive that sheep can be grown fully as successfully on land at \$5 to \$10 per acre as on free grass. Then ranges are becoming more and more restricted every year; and, as this becomes more so, farmers will find sheep more and more profitable in smaller bands.

I expect to visit Virginia in August, if business will permit; and, if crops are prosperous in the Valley this season, it may be possible for us to handle some sheep with a small margin to ourselves. We now own some 8,000 to 10,000 head here in New Mexico; and, if I could make some contracts while there during the summer, for delivery in the late fall, I would not hesitate to do so.

If through your channels of information you have any means of finding out the disposition of the people along your roads on this question, I would be very glad to know what their feelings are; and, if there seems to be anything in the matter of mutual interest, I would try to see you personally during the summer, while I am in that section. It ought not to be hard to dispose of 1,000 sheep, in lots of 50 or 100 head, in a comparative restricted section. And, if the outcome was good, we could handle a larger shipment another season.

I will be very glad to hear from you again on the sheep question, and to know your general views on my suggestions. I will remain here until about July 1, and be in the East after that time. My permanent address is 112 Michigan Street, Chicago, which is the main house of our concern.

Will add, in the way of general remarks, that from now forward beef will be higher priced on account of the restricted ranges and periodical large losses in heavy cattle; farmers will be unable to produce cattle at the prices which range cattle have been selling at; and, while steers cannot be matured in less than three years, sheep are marketable in large quantities from the age of four months until too old for service. And there is no other animal in existence which will give its increase and pay for its keeping and interest on the investment (by the wool) as sheep will do, if handled with ordinary intelligence.

Trusting my long letter has not fatigued you, and that I may be favored with another communication from you, I remain,

Yours truly,

(Signed)

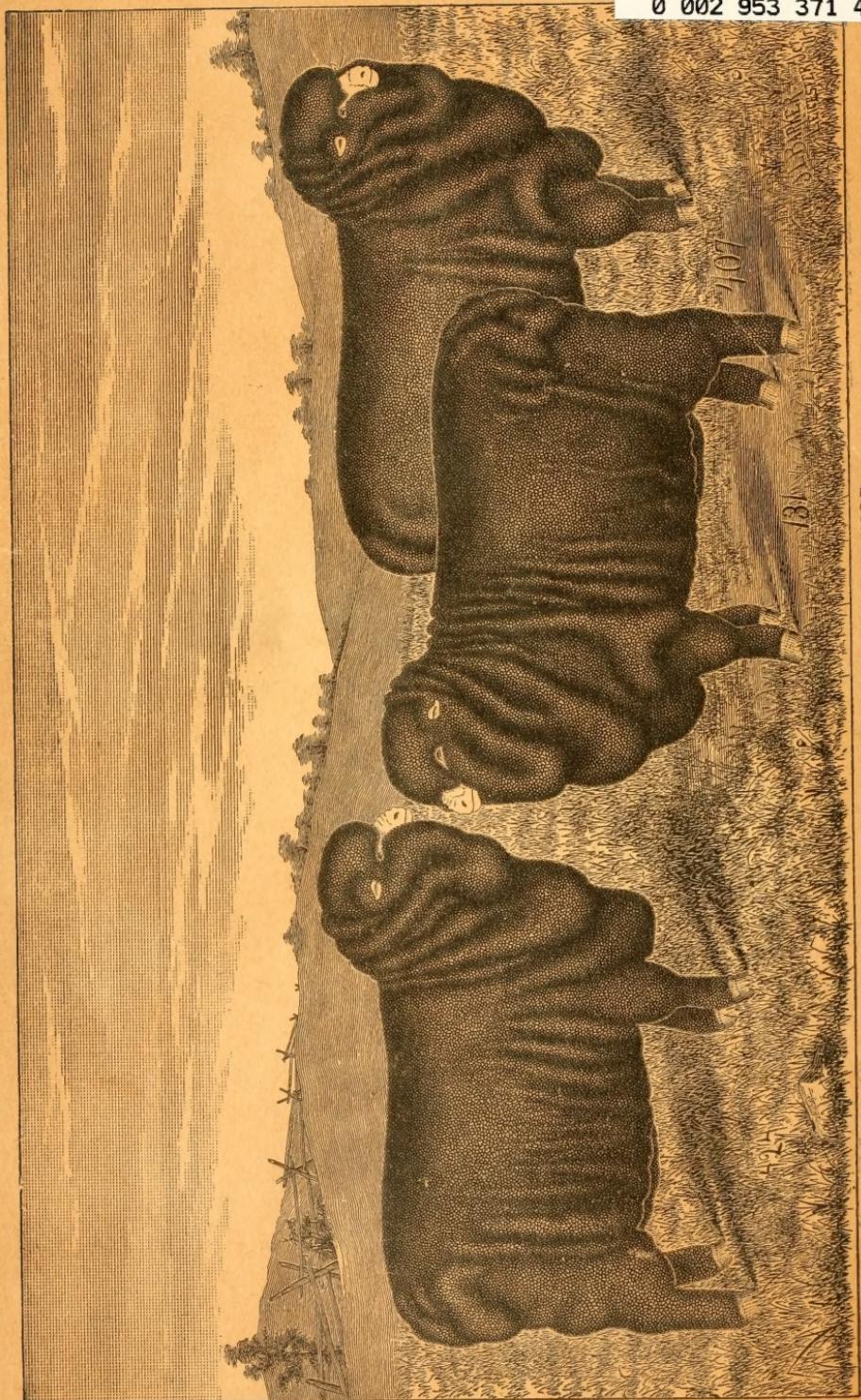
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